

# 2016 :: SUSTAINABLE INDUSTRIAL PROCESSING SUMMIT & EXHIBITION



**D'ABREU**  
INTERNATIONAL  
SYMPOSIUM



**DUBOIS**  
INTERNATIONAL  
SYMPOSIUM



**ØYE**  
INTERNATIONAL  
SYMPOSIUM



**SANTILLI**  
INTERNATIONAL  
SYMPOSIUM



**STARKEY**  
INTERNATIONAL  
SYMPOSIUM



**YAGI**  
INTERNATIONAL  
SYMPOSIUM



**YANG**  
INTERNATIONAL  
SYMPOSIUM

## PROGRAM



**Nobel Laureate  
Events**



**Dan SHECHTMAN**  
2011  
Nobel Prize in Chemistry

6 - 10 Nov. 2016,  
Sanya Marriott Yalong  
Hainan, China

**FLOGEN**  
STAR OUTREACH

**GrandNancy**  
COMMUNAUTÉ URBAINE & HUMAINE  
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**G** Tech  
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**Summit WebSite:** [www.flogen.org/sips2016](http://www.flogen.org/sips2016) **Contact:** Dr Florian Kongoli ([fkongoli@flogen.org](mailto:fkongoli@flogen.org))  
**Phone:** 1-514-344-8786 Toll Free: 1-877-2-FLOGEN (Within North America) **Fax:** 1-514-344-0361

# Chair



**Florian Kongoli**  
Flogen Technologies Inc.  
Canada / USA

# Symposia Committees



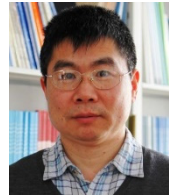
**Florian Kongoli**  
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**Vasant Kumar**  
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United Kingdom



**Katerina Aifantis**  
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**Guo Xueyi**  
Central South University  
Changsha, Hunan, China



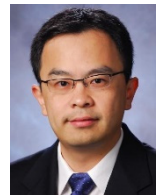
**Naixiang Feng**  
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China



**Elias Aifantis**  
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Univ., USA



**Hongtao Wang**  
Zhejiang University  
China



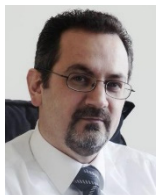
**Ting Zhu**  
Georgia Tech  
USA



**Petter Polyakov**  
Federal University of  
Siberia, Russia



**Claudio Capiglia**  
RECRUIT R&D Co.  
Japan



**Giampaolo Crepaldi**  
Chevron Industries  
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Russia



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**Arkady Senchenko**  
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**Bern Klein**  
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Columbia, Canada



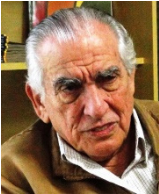
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cmc Instruments GmbH  
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**Marcos Contrucci**  
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**Pawel Rokicki**  
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Singapore



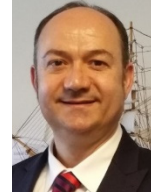
**Hui Xia**  
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Science and Technology  
China



**Chunbao Sun**  
University of Science and  
Technology Beijing, China



**Wei Mingan**  
HMR Co.  
China



**Tamer Turna**  
Yildirim Energy  
Turkey

# Contents

Chair.....	2
Symposia Committees.....	2
Welcome Message.....	6
Calendar of Events.....	8
Meeting Rooms Diagram.....	9
International Committee.....	10
Sponsors.....	14
Social Events.....	15
Accompanying Activities.....	16
Summit Plenary.....	17
Scientific Program.....	20
Oral Presentations:.....	20
Monday:.....	20
Tuesday:.....	46
Wednesday:.....	71
Thursday:.....	92
Posters:.....	94
Technical Program Authors Index.....	104
Sponsor Logos & Corporate Section.....	116
Organization Sponsor:.....	116
Corporate Sponsors:.....	116
Partner Events:.....	116
Professional Societies:.....	116
Technology Institutes:.....	117
Media:.....	117
Academic Institutions:.....	117
Journals and Publishers:.....	117
Partner Airlines.....	119

# Welcome Message

Welcome to the 2016 Sustainable Industrial Processing Summit and Exhibition. Following the previous rich tradition, the summit will cover 3 sustainability pillars: (1) Science, Technology and Industrial Practice, (2) Political and Social Framework and (3) Education.

This time, the summit honors the 2016 STARS of the closed cycle of materials sciences: from mining and mineral processing to metals extraction and processing and development of new materials. They are in alphabetic order:

	<p><b>Prof. Jose D'Abreu</b> - 2016 honoree with D'Abreu International Symposium on Sustainable Iron and Steel Making</p>
	<p><b>Prof. Jean-Marie Dubois</b> - 2016 honoree with Dubois International Symposium on Sustainable Complex Metallic Systems</p>
	<p><b>Prof. Harald Arnljot Øye</b> - 2016 honoree with Øye International Symposium on Sustainable Ionic Liquid and Aluminum Extraction and Processing</p>
	<p><b>Prof. Ruggero Santilli</b> - 2016 honoree with Santilli International Symposium on Sustainable Mathematics Applications</p>
	<p><b>John Starkey</b> - 2016 honoree with Starkey International Symposium on Sustainable Mineral Processing</p>
	<p><b>Prof. Jun-Ichiro Yagi</b> - 2016 honoree with Yagi International Symposium on Sustainable Metal and Alloys Processing</p>



**Prof. Wei Yang - 2016 honoree**

with Yang International Symposium on Multiscale Material Mechanics and Multiphysics and Sustainable Applications

The honorees cover areas of materials sciences that look distinct but are actually related to each other and all have in common sustainability.

In this view, in their honor, the summit incorporates numerous International Symposia covering the field of minerals, metals and materials - dealing with mining, extraction, processing, manufacturing, recycling, waste treatment, and acting on environmental, health, legal, management, financial, policy, taxation, social and pedagogy issues. Please click on the "symposia" link in the left side menu for the full symposia listing



Prof. Dan Shechtman, 2011 Nobel Laureate in Chemistry, will present and interact on the topics "Pathways to Innovative and Entrepreneurial Society" and "Science and Aesthetics". Besides being the 2011 Nobel Laureate in Chemistry, Professor Shechtman is known as one of the Pioneers of Technological Start-up Revolution (Financial Times, 2012). It is an inspiring accounting on his experience on the role of technological entrepreneurship on the sustainable world peace and prosperity with rich advises for success drawn from successful entrepreneurs he helped train.

**Dr. Florian Kongoli**

Summit Chairman and Organizer  
Chairman FLOGEN Stars Outreach

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[fkongoli@flogen.com](mailto:fkongoli@flogen.com)



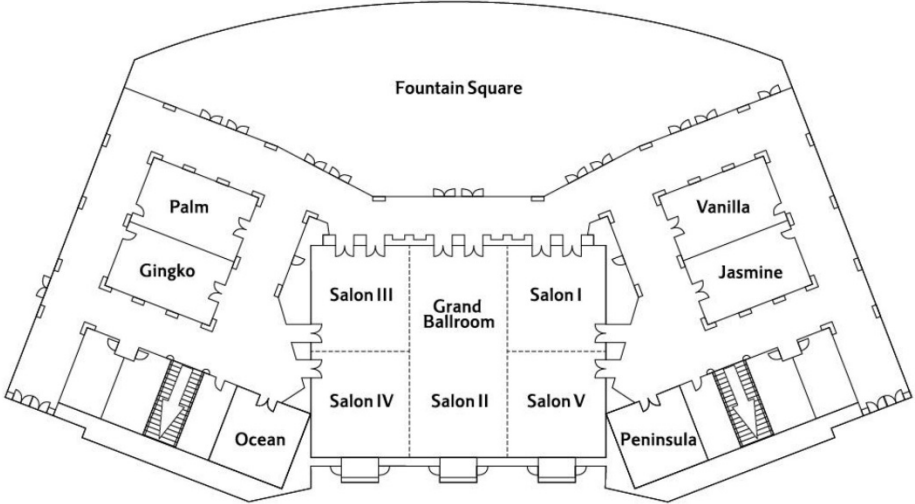
# Calendar of Events

	08:30 - 12:30	12:30 - 14:00	14:00 - 18:00	18:30 - 23:00																
	SHORT COURSES				SUMMIT REGISTRATION				SUMMIT PLENARY				SUMMIT PLENARY				SUMMIT PLENARY			
	LUNCH/POSTERS				LUNCH/POSTERS				LUNCH/POSTERS/EXHIBITION				LUNCH/POSTERS/EXHIBITION				LUNCH/POSTERS/EXHIBITION			
	Beach Lawn or Beach: Opening Event: Dinner/Band Music/Dance and show				Beach Lawn or Beach: Opening Event: Dinner/Band Music/Dance and show				Beach Lawn or Beach: Opening Event: Dinner/Band Music/Dance and show				Beach Lawn or Beach: Opening Event: Dinner/Band Music/Dance and show				Beach Lawn or Beach: Opening Event: Dinner/Band Music/Dance and show			
	JASMINIE	JASMINIE	JASMINIE	JASMINIE	HERB I	PALM	JASMINE	JASMINE	JASMINE	HERB II	SALON I/IV	SALON I/IV	SALON I/IV	SALON I/IV	HERB II	VANILLA	PENINSULA	OCEAN		
SUN																				
MON																				
TUE																				
WED																				
THU																				
	08:30 - 10:30	10:30 - 10:55	10:55 - 12:35	12:35 - 14:00	14:00 - 15:40	15:40 - 16:05	16:30 - 17:45	17:45 - 18:30	18:30 - 23:00											
	GINKO	DUBOIS 1	D'ABREU 1	SANTILLI 1	ØYE 1	STARKEY 1	YAGI 1	YANG 1	MOLTEN 1	NON-FEROUS 1	AMTSEE 1	BATTERY 1								
		DUBOIS 2	D'ABREU 2	SANTILLI 2	ØYE 2	STARKEY 2	YAGI 2	YANG 2	MOLTEN 2	NON-FEROUS 2	AMTSEE 2	BATTERY 2								
		DUBOIS 3	D'ABREU 3	SANTILLI 3	ØYE 3	STARKEY 3	YAGI 3	YANG 3	MOLTEN 3	NON-FEROUS 3	AMTSEE 3	BATTERY 3								
	Fountain Square : Dinner/Band Music/Dance and show																			
	08:30 - 10:30	10:30 - 10:55	10:55 - 12:35	12:35 - 14:00	14:00 - 15:40	15:40 - 16:05	16:30 - 17:45	17:45 - 18:30	18:30 - 23:00											
	GINKO	DUBOIS 4	D'ABREU 4	SANTILLI 4	ØYE 4	STARKEY 4	YAGI 4	YANG 4	MOLTEN 4	NON-FEROUS 4	ENERGY 1	BATTERY 4								
		DUBOIS 5	D'ABREU 5	SANTILLI 5	ØYE 5	STARKEY 5	YAGI 5	YANG 5	MOLTEN 5/ R.T	NON-FEROUS 5	ENERGY 2	BATTERY 5								
		DUBOIS 6	D'ABREU 6	SANTILLI 6	ØYE 6	STARKEY 6	YAGI 6	YANG 6	RECYCLING 1	NONFERROUS6/R.T.	ENERGY 3	MSMSSS								
	Grand Ballroom: Gala Dinner and Show																			
	08:30 - 10:30	10:30 - 10:55	10:55 - 12:35	12:35 - 14:00	14:00 - 15:40	15:40 - 16:05	16:30 - 17:45	17:45 - 18:30	18:30 - 23:00											
	GINKO	DUBOIS 7	D'ABREU 7	SANTILLI 7	PHYSICS 1	MIXING/CEMENT	YAGI 7	YANG 7	RECYCLING 2	ROTARY_KILN	ENERGY 4	YAGI 10								
		DUBOIS 8	D'ABREU 8	SANTILLI 8	PHYSICS 2	STARKEY R.T.	YAGI 8	YANG 8	RECYCLING 3	COATINGS	ENERGY 5	YAGI 11								
		DUBOIS 9/	D'ABREU 9/	SANTILLI 9/	ØYE	STARKEY	YAGI 9	YANG 9	RECYCLING 4/	CERAMIC	ENERGY 6/	YAGI 12								
		ROUND TABLE	ROUND TABLE	ROUND TABLE	ROUND TABLE	ROUND TABLE	ROUND TABLE	ROUND TABLE	ROUND TABLE	ROUND TABLE	ROUND TABLE	ROUND TABLE								
	Pool Side & Fish Bar: Dinner and Band Music and Show																			
	08:30 - 10:30	10:30 - 10:55	10:55 - 12:35	12:35 - 14:00	14:00 - 15:40	15:40 - 16:05	16:30 - 17:45	17:45 - 18:30	18:30 - 23:00											
	GINKO	DUBOIS 10	D'ABREU 10	SANTILLI 10																
		DUBOIS 11	D'ABREU 11	SANTILLI 11																
		DUBOIS 12	D'ABREU 12	SANTILLI 12																



# Meeting Rooms Diagram

Meetings & Events



## FUNCTION AREA

DESTINATION THIS HOTEL ACCOMMODATION RESTAURANTS & LOUNGES MICE WEDDINGS QUAN SPA RECREATION & LEISURE  
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# International Committee

This summit is being organized by an international committee spanning six continents and representing major industrial ferrous, nonferrous, materials and recycling companies as well as universities from around the world.



## ASIA

- Tomohiro **Akiyama**, Hokkaido University, Japan
- Anil A. **Bhalekar**, R. T. M. Nagpur University, India
- Daqiang **Cang**, University of Science and Technology Beijing, China
- Claudio **Capiglia**, RECRUIT R&D Co., Japan
- Sang Ming **Choi**, KAIST, South Korea
- Yong **Choi**, Dankook University, South Korea
- Mansheng **Chu**, Northeastern University, China Andrey N. Dmitriev, Ural Federal University, Russia
- Chuang **Dong**, Dalian University of Technology, China
- Naixiang **Feng**, Northeastern University, China
- Agustin **Fudolig**, MIRDC, Philippines
- Akio **Fujibayashi**, JFE Steel Corporation, Japan
- Alexander **Kandelaki**, Ferdinand Tavadze Institute, Georgia
- Hyun-Soo **Kim**, POSCO, South Korea
- Kazuya **Kunitomo**, Kyushu University, Japan
- Eiki **Kasai**, Tohoku University, Japan
- Chung Tae **Kim**, JNE Corporation, South Korea
- Pavel **Kozlov**, Chelyabinsk, Russia
- Svetlana **Leiman**, VNIItsvetmet, Kazakhstan
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- Wei **Mingan**, HMR Co., China
- Hiroshi **Nogami**, Tohoku University, Japan
- Jun-Yong **Park**, Yonsei University, South Korea

- Sungging **Pintowantoro**, Institute Technology of Sepuluh Nopember, Indonesia
- Petter **Polyakov**, Federal University of Siberia, Russia
- Swatantra **Prakash**, NML (National Metallurgical Laboratory), Jamshedpur, India
- Hadi **Purwanto**, International Islamic University, Malaysia
- Tian **Qinghua**, Central South University, Changsha, Hunan, China
- Srinivasa **Ranganathan**, Indian Institute of Science, India
- Koji **Saito**, NSSMC, Japan
- Arkady **Senchenko**, TOMS Institute, Russia
- Fengman **Shen**, Northeastern University, China
- Viktor **Shumskiy**, VNIItsvetmet, Kazakhstan
- Lek **Sikong**, Prince of Songkla University, Thailand
- Il **Sohn**, Yonsei University, South Korea
- Yuriy **Storozhev**, Siberian Federal University, Russia
- Chunbao **Sun**, University of Science and Technology Beijing, China
- Ryuichi **Tomoshige**, SOJO University, Japan
- An Pang **Tsai**, Tohoku University, Sendai, Japan
- Tateo **Usui**, Osaka University, Japan
- Hongtao **Wang**, Zhejiang University, China
- Wanlin **Wang**, Central South University, China
- Hui **Xia**, Nanjing University of Science & Technology, China
- Bi **Xuegong**, Wuhan Univ. of Science and Technology, China
- Guo **Xueyi**, Central South University, Changsha, Hunan, China
- Soon Jae **Yu**, Sunmoon University, South Korea
- Yongzhu **Zhang**, Central South University, Changsha, Hunan, China

## AUSTRALIA

- David **Young**, University of New South Wales, Sydney, Australia
- Aibing **Yu**, Monash University, Australia

## EUROPE

- Hesham **Ahmed**, Lulea University of Technology, Sweden
- Lidia **Benea**, Dunarea de Jos University of Galati, Romania
- Mariana **Calin**, IFW Dresden, Germany
- Amit **Chattopadhyay**, Aston University, UK
- J.M.D. **Coey**, Trinity College Dublin, Ireland
- Giampaolo **Crepaldi**, Chevron Industries, UK
- Valérie **Demange**, CNRS, Rennes, France
- Nurten **Deva**, UMIB, Kosovo
- Jurgen **Eckert**, University of Leoben, Austria

- Chenlong **Gao**, University of Cambridge, UK
- Svetlin **Georgiev**, Sorbonne University, France
- Yuri **Grin**, Max Planck Society, Dresden, Germany
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- Benjamin **Klusemann**, Leuphana University of Luneburg, Germany
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- Francesca **Pagnanelli**, Sapienza University of Rome, Italy
- Emilio Martinez **Paneda**, University of Oviedo, Spain
- Ana-Maria Julieta **Popescu**, Ilie Murgulescu Institute of Physical Chemistry, Romania
- Musa **Rizaj**, Prishtina University, Kosovo
- Pawel **Rokicki**, Rzeszow University of Technology, Poland
- Henrik **Saxen**, Abo Akademi University, Finland
- Michael **Zehetbauer**, University of Vienna, Austria
- Tina **Zuzek**, Jozef Stefan Institute, Slovenia

## NORTH AMERICA

- Katerina **Aifantis**, University of Arizona, USA
- Harold L. **Dodds**, University of Tennessee, USA
- Pramod **Kumar**, Polycorp Ltd., Canada
- Laura Henderson **Lewis**, Northeastern University, USA
- Fernand **Marquis**, San Diego State University, USA
- Brajendra **Mishra**, Worcester Polytechnic Institute, USA
- Patricia A **Thiel**, Iowa State University, Ames, IA, USA
- Ting **Zhu**, Georgia Tech, USA

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- Walter **Botta**, Federal University of San Carlos, Brazil
- Eduardo **Brocchi**, PUC-Rio, Brazil
- Jose Adilson de **Castro**, Federal Fluminense University, Brazil

- Marcos **Contrucci**, MAC Co., Brazil
- Fernando **Lins**, CETEM, Brazil
- Mery Cecilia Gomez **Marroquin**, APMMM; UNI, Peru
- Marcelo Breda **Mourao**, USP, Brazil
- Joao Batista Ferreira **Neto**, IPT, Brazil
- Gerson Juan Centty **Portugal**, National University of San Agustin, Peru
- Andre Carlos **Silva**, Univ. Federal de Goias, Brazil
- Cyro **Takano**, USP, Brazil
- Antonio **Vilela**, UFRGS, Brazil



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## Corporate Sponsor

- FLOGEN Technologies Inc
- DOMEL Sustainable innovative solutions
- TOMS Group

## Government & Public

### Organizations

- Métropole du Grand Nancy, NANCY France

## Partner Events

- WMC 2016 - 24th World Mining Congress
- ABM Brasil - ABM Week 2016

## Professional Societies

- American Chemical Society
- International Society of Electrochemistry
- The Institute of Materials, Minerals and Mining
- Canadian Minerals Processors Society
- Brazilian Association of Metallurgy
- GDMB
- Association Peruvian Metallurgical, Materials & Minerals (APMMM)
- Hellenic Metallurgical Society
- Slovenian Chemical Society (SCS)
- Materials Research Society of Serbia

## Technology Institutes

- Brazilian Mining Institute
- National R&D Institute for Nonferrous and Rare Metals

## Academic Institutions

- Ferdinand Tavadze Institute of Metallurgy & Materials Science

## Media

- Minerals Engineering International

## Journals and Publishers

- Copper Worldwide
- De Gruyter Open - Emerging science publishers
- Open Chemistry
- Aluminium International Today
- Mineral Processing & Extractive Metallurgy
- "Ore and Metals" Publishing House
- Journal of Mining and Metallurgy
- Journal of International
- Environmental Application & Science
- ChemElectroChem Journal
- ChemistryViews
- Nanomaterials and Energy
- Critical Reviews in Solid State and Materials Sciences

## Partner Airlines

- SKYTEAM Airlines
- Air Canada
- Air France & KLM

# Social Events

(Preliminary)

**Sunday** 6 Nov.2016: Opening Event, Beach Lawn or Beach: Dinner/Band Music/Danse and show. **Attire:** Business Casual

**Monday** 7 Nov.2016: Fountain Square: Dinner/Band Music/Danse and show **Attire:** Business Casual.

**Tuesday** 8 Nov.2016: Grand Ballroom: Gala Dinner and Show. **Attire:** Black tie/Business.

**Wednesday** 9 Nov 2016: Pool Side and Fish Bar Lawn: Dinner/Band Music/Danse and show **Attire:** Business Casual.

**Every Day:** Organized Entertainment activities after hours (Pool and beach volleyball, language and dance lessons, etc.)

**NOTE:** Free Participation of all attendees guests/companion in all social activities, group dinners and shows for those we have pre-registered for free during registration process. Due to space limitation the persons who have not preregistered need to pay an additional fee of 60 Euros on site to participate on social events.

**WARNING:** Organizing Committee reserve the right to modify/change or cancel the social activities without prior notice depending on the number of registrants in the web site during the registration process for each activity.

# Accompanying Activities

Free Participation of one guests/companion in all social activities, group dinners and shows for those who have pre-registered for free during registration process. Due to space limitation the persons who have not preregistered need to pay an additional fee of 60 Euros on site to participate on social events.

The organizers have assured reduced fees for numerous extra curriculum activities during your stay before, during or after the symposium.

For on-site booking contact the secretary office on site at the registration desk.

# Summit Plenary

(Preliminary as of 24 October 2016- to be updated on site)

SESSION: **SUMMIT PLENARY**

Mon Nov, 07 2016

Room: **Grand Ballroom**

Session Chair: Florian Kongoli

**08:15am:** [PlenaryMon01] General Plenary

## **Summit Thematic Opening**

**F. Kongoli**<sup>1</sup>; <sup>1</sup>Flogen Technologies Inc., Canada/USA;

Paper Id: 516

**08:30am:** [PlenaryMonAM.02] General Plenary

## **Pathways to Innovative and Entrepreneurial Society**

**D. Shechtman**<sup>1</sup>; <sup>1</sup>Technion, Israel & Iowa State University, USA

Paper Id: 515

**09:00am:** [PlenaryMonAM.03] General Plenary

## **Nanoparticle technology overview and recent developments for sustainable applications**

**A. Muramatsu**<sup>1</sup>; <sup>1</sup>Tohoku University, Sendai, Japan;

Paper Id: 485

**09:30am:** [PlenaryMonAM.04] General Plenary

## **Environmental and Material Sustainability Through Value-Added Products Conversion From Bauxite Residue**

**B. Mishra**<sup>1</sup>; <sup>1</sup>Worcester Polytechnic Institute, Worcester, United States;

Paper Id: 246

**10:00am:** [PlenaryMonAM.05] General Plenary

## **Electron Microscopy Overview and Recent Developments for Sustainable Development**

**R. Dunin Borkowski**<sup>1</sup>; <sup>1</sup>Forschungszentrum Jülich, Jülich, Germany (Deutschland);

Paper Id: 514

**SESSION: SUMMIT PLENARY**

Tue Nov, 08 2016

Room: **Grand Ballroom**

Session Chair: Florian Kongoli, Vasant Kumar

**08:15am:** [PlenaryTue01] General Plenary

**Thematic Address 1**

**F. Kongoli**<sup>1</sup>; <sup>1</sup>Flogen Technologies Inc., Canada/USA;

Paper Id: 517

**08:30am:** [PlenaryTueAM.02] General Plenary

**The Novel Sustainable Hyper-Combustion and Hyper-Furnaces of Thunder Energies Corporation**

**P. Santilli**<sup>1</sup>; <sup>1</sup>Thunder Energies Corporation, Tarpon Springs, United States;

Paper Id: 466

**09:00am:** [PlenaryTueAM.03] General Plenary

**Research Landscape of China Mainland**

**W. Yang**<sup>1</sup>; <sup>1</sup>National Natural Science Foundation of China, Peking, China;

Paper Id: 493

**09:30am:** [PlenaryTueAM.04] General Plenary

**The importance of power plant flexibility and high efficiency in the Power Market -Value expectations of high standard digital solutions and their importance in challenging market Environments-**

**T. Turna**<sup>1</sup>; <sup>1</sup>YILDIRIM ENERGY INVESTMENTS INC, Maslak, Turkey;

Paper Id: 505

**10:00am:** [PlenaryTueAM.05] General Plenary

**Permanent Magnets for Sustainable Energy Applications.**

**M. Coey**<sup>1</sup>; <sup>1</sup>School of Physics, Dublin, Ireland;

Paper Id: 513



**SESSION: SUMMIT PLENARY**

Wed Nov, 09 2016

Room: **Grand Ballroom**

Session Chair: Florian Kongoli

**08:15am:** [PlenaryWed01] General Plenary

**Thematic Address 2**

**F. Kongoli**<sup>1</sup>; <sup>1</sup>Flogen Technologies Inc., Mont-Royal, Canada;

Paper Id: 518

**08:30am:** [PlenaryWedAM.02] General Plenary

**Recycling of by-products from metallurgical processes - a contribution to a sustainable metal production**

**J. Antrekowitsch**<sup>1</sup>; <sup>1</sup>Christian Doppler Association, University of Leoben, Leoben, Austria;

Paper Id: 421

**09:00am:** [PlenaryWedAM.03] General Plenary

**Environmentally Sustainable Ironmaking: What Should the Future Hold?**

**J. D Abreu**<sup>1</sup>; <sup>1</sup>PUC-Rio, Rio de Janeiro, Brazil;

Paper Id: 506

**09:30am:** [PlenaryWedAM.04] General Plenary

**Aluminum Extraction Overview and news sustainable developments**

**H. Oye**<sup>1</sup>; <sup>1</sup>NTNU, Trondheim, Norway;

Paper Id: 519

**10:00am:** [PlenaryWedAM.05] General Plenary

**Perspectives on the Role of New Advanced Materials in Sustainable Development**

**F. Marquis**<sup>1</sup>; <sup>1</sup>San Diego State University, Department of Mechanical Engineering, San Diego, United States;

Paper Id: 262

# Scientific Program

Oral Presentations:

**Monday:**

**08:30 AM - 10:30 PM SUMMIT PLENARY**

**10:30 AM Break**

SESSION: **Non-ferrousMonAM.**                      **4th Intl. Symp. on Sustainable Non-ferrous Smelting and Hydro/Electrochemical Processing**

Mon Nov, 07 2016

Room: **VANILA**

Session Chairs: Viktor **Shumskiy**; Larissa **Kushakova**; Student Monitor: TBA

**10:55 AM.:** [Non-ferrousMonAM.02]

**Investigation of Reaction Mechanism in Oxygen-Enriched Direct Smelting of Jamesonite Concentrate**

**X. Dai**<sup>1</sup>; X. Chen<sup>1</sup>; <sup>1</sup>School of Metallurgy and Environment, Central South University, Changsha, China;

Paper Id: 92

**11:20 AM.:** [Non-ferrousMonAM.03] Plenary

**[KIVCET] Selection Of Reductant For Lead Flash Smelting Processes**

**V. Shumskiy**<sup>1</sup>; <sup>1</sup>VNIItsvetmet, Ust-Kamenogorsk, Kazakhstan;

Paper Id: 123

**11:45 AM.:** [Non-ferrousMonAM.04]

**Practice Of Associated Components Recovery While Processing Of Non-Ferrous Metals Ores In Kazakhstan**

**L. Kushakova**<sup>1</sup>; V. Shumskiy<sup>1</sup>; <sup>1</sup>VNIItsvetmet, Ust-Kamenogorsk, Kazakhstan;

Paper Id: 125

**12:10 AM.:** [Non-ferrousMonAM.05]

**Receiving The Qualitative Rutile Concentrate From Sub-Standard Titanium Slag**

**M. Naimanbayev**<sup>1</sup>; <sup>1</sup>Center of Earth Sciences, Metallurgy and Ore Benefication, Almaty, Kazakhstan;

Paper Id: 158

**12:50 PM LUNCH**

SESSION: **Non-ferrousMonPM1**

**4th Intl. Symp. on Sustainable Non-ferrous Smelting and Hydro/Electrochemical Processing**

Mon Nov, 07 2016

Room: **VANILA**

Session Chairs: Xueyi **Guo**; Qinmeng **Wang**; Student Monitor: TBA

**02:00 PM1:** [Non-ferrousMonPM106] Plenary

**Optimization And Control Of Hoboken Converter Operations With Flogen Contop Control Expert System**

**L. Vieira**<sup>1</sup>; **M. Guzzo**<sup>1</sup>; **F. Leite**<sup>1</sup>; **M. Bittencourt Marques**<sup>1</sup>; **M. De Souza**<sup>2</sup>; **R. Merdjani**<sup>3</sup>; **F. Kongoli**<sup>4</sup>; <sup>1</sup>Paranapanema, Dias d'Avila, Brazil; <sup>2</sup>FLOGEN TECHNOLOGIES INC., Dias d'Avila, Brazil; <sup>3</sup>FLOGEN TECHNOLOGIES INC., Mont-Royal, Canada; <sup>4</sup>Flogen Technologies Inc., Mont-Royal, Canada;  
Paper Id: 482

**02:25 PM1:** [Non-ferrousMonPM107]

**[KIVCET] Simulation Of Oxidized Lead Melt Infiltration Through The Carbon Material Layer**

**V. Shumskiy**<sup>1</sup>; <sup>1</sup>VNIItsvetmet, Ust-Kamenogorsk, Kazakhstan;  
Paper Id: 124

**02:50 PM1:** [Non-ferrousMonPM108]

**[KIVCET] Study On Hygroscopicity And Microstructure Of Mixed Lead Concentrate And Recycle Dust In Kivcet Flash Smelting Process**

**J. Li**<sup>1</sup>; **P. Zhou**<sup>1</sup>; **H. Yan**<sup>1</sup>; **J. Ma**<sup>1</sup>; **Z. Liao**<sup>2</sup>; <sup>1</sup>Central South University, Changsha, China; <sup>2</sup>Zhuzhou Smelter Group Co., Zhuzhou, China;  
Paper Id: 213

**03:15 PM1:** [Non-ferrousMonPM109]

**Mechanism Of Oxygen-Enriched Bottom Blowing Copper Smelting Process (SKS)**

**Q. Wang**<sup>1</sup>; **Q. Tian**<sup>1</sup>; **X. Guo**<sup>1</sup>; <sup>1</sup>Central South University, Changsha, China;  
Paper Id: 173

**03:40 AM** Break

SESSION: **Non-ferrousMonPM2**

**4th Intl. Symp. on Sustainable Non-ferrous Smelting and Hydro/Electrochemical Processing**

Mon Nov, 07 2016

Room: **VANILA**

Session Chairs: Madali **Naimanbayev**; Jadong **Li**; Student Monitor: TBA

**04:05 PM2:** [Non-ferrousMonPM210]

**Effect Of Flow Pattern On Energy Consumption And Properties Of Copper Powder In The Electrolytic Process**

**X. Wentang**<sup>1</sup>; **X. Xiaoyan**<sup>1</sup>; **W. Yang**<sup>2</sup>; **J. Yin**<sup>1</sup>; <sup>1</sup>, Chongqing, China; <sup>2</sup>School of Metallurgical and Materials Engineering, University of Science and Technology, Chongqing, China;

Paper Id: 110

**04:30 PM2:** [Non-ferrousMonPM211]

**Optimization Of Temperature Control In The Oxidation Step Of Cu<sub>2</sub>S In Peirce Smith Converter, Using As A Tool The Optical Process Control (OPC).**

**C. Gerson Juan**<sup>1</sup>; F. Kongoli<sup>2</sup>; <sup>1</sup>FLOGEN Technologies Inc., Arequipa, Peru; <sup>2</sup>Flogen Technologies Inc., Mont-Royal, Canada;

Paper Id: 147

**04:55 PM2:** [Non-ferrousMonPM212]

**3D Computer Model Of The Ag-Au-Sb T-X-Y Diagram For Lead-Free Solders**

**V. Lutsyk**<sup>1</sup>; V. Vorob'eva<sup>1</sup>; <sup>1</sup>Institute of Physical Materials Science SB RAS, Ulan-Ude, Russian Federation;

Paper Id: 93

**05:20 PM2:** [Non-ferrousMonPM213]

**Boron Removal from Metallurgical Grade Silicon Using a United Blowing-slugging Secondary Refining Technique**

**M. Xu**<sup>1</sup>; **J. Wu**<sup>1</sup>; **W. Ma**<sup>1</sup>; <sup>1</sup>Kunming University of Science and Technology, KUNMING, China;

Paper Id: 210

**05:45 PM** Organized Activities

**08:30 AM - 10:30 PM** **SUMMIT PLENARY**

**10:30 AM** Break

SESSION: **MaterialsForEnergyMonAM.**

**2nd Intl. Symp. on Advanced Materials and Technologies for Sustainable Energy and the Environment(AMTSEE)**

Mon Nov, 07 2016

Room: **PENINSULA**

Session Chairs: Fernard **Marquis**; Rade **Biocanin**; Student Monitor: TBA

**10:55 AM.:** [MaterialsForEnergyMonAM.02]

**Nano and Nanostructured Materials Systems for Energy Applications**

**F. Marquis**<sup>1</sup>; <sup>1</sup>San Diego State University, Department of Mechanical Engineering, San Diego, United States;

Paper Id: 394

**11:20 AM.:** [MaterialsForEnergyMonAM.03]

**Removal Of Cu(II) Cation From Aqueous Solution Using Wasted Low Grade Phosphorus-Containing Iron Ore Adsorbent**

**X. Yuan**<sup>1</sup>; **X. Wentang**<sup>2</sup>; **X. Xiaoyan**<sup>2</sup>; **J. An**<sup>3</sup>; **X. Zhou**<sup>4</sup>; **J. Yin**<sup>2</sup>; **W. Yang**<sup>3</sup>; <sup>1</sup>, chongqing, China; <sup>2</sup>, Chongqing, China; <sup>3</sup>School of Metallurgical and Materials Engineering, University of Science and Technology, Chongqing, China; <sup>4</sup>Chongqing University of Science & Technology, Chongqing, China;

Paper Id: 268

**11:45 AM.** [MaterialsForEnergyMonAM.04]

**Factors Of Education In Schools And Colleges With An Emphasis On Environmental Education**

**R. Biocanin**<sup>1</sup>; S. Stefanov<sup>2</sup>; <sup>1</sup>State University of Novi Pazar, Novi Pazar, Serbia and Montenegro (formerly Yugoslavia); <sup>2</sup>, Pancevo, Serbia and Montenegro (formerly Yugoslavia);

Paper Id: 24

**12:10 AM.** [MaterialsForEnergyMonAM.05]

**Research on Iron Ore Reduction by Coke Oven Gas auto-reforming**

**Q. Lin**<sup>1</sup>; W. Chengbo<sup>2</sup>; J. Zhang<sup>3</sup>; <sup>1</sup>, Chongqing, China; <sup>2</sup>Chongqing University, Chongqing, China; <sup>3</sup>Guangxi Alnan Aluminium Fabrication Co., Ltd, chongqing, China;

Paper Id: 40

**12:50 PM LUNCH**

SESSION: **MaterialsForEnergyMonPM1**

**2nd Intl. Symp. on Advanced Materials and Technologies for Sustainable Energy and the Environment (AMTSEE)**

Mon Nov, 07 2016

Room: **PENINSULA**

Session Chairs: Xu **Chaohe**; Wei **Xiao**; Student Monitor: TBA

**02:00 PM1:** [MaterialsForEnergyMonPM106]

**Controllable Preparation Of Nanostructured Si And/Or Ge Via Electrolysis Of Oxides In Molten Chlorides**

**W. Xiao**<sup>1</sup>; <sup>1</sup>Wuhan University, Wuhan, China;

Paper Id: 336

**02:25 PM1:** [MaterialsForEnergyMonPM107]

**Energy Efficiency Assessment of University Buildings - Case Study: Technical Faculty Building**

**V. Nushi**<sup>1</sup>; J. Pula<sup>2</sup>; M. Qelaj<sup>3</sup>; <sup>1</sup>University of Pristina "Hasan Prishtina", Faculty of Civil Engineering and Architecture, Department of Architecture, Pristina,

Kosovo; <sup>2</sup>University of Pristina "Hasan Prishtina", Faculty of Economy, Pristina, Kosovo; <sup>3</sup>Ministry of Economic Development, Pristina, Kosovo;

Paper Id: 287

**02:50 PM1:** [MaterialsForEnergyMonPM108]

**Development Of Nickel (Oxy)Hydroxide/Graphene Hydrogels For Asymmetric Supercapacitors**

**X. Chaohe**<sup>1</sup>; <sup>1</sup>Chongqing University, Chongqing, China;

Paper Id: 328

**03:15 PM1:** [MaterialsForEnergyMonPM109]

**Synthesis Characterization And Conductivity of Sr<sub>1-x</sub>NaxSiO<sub>3-d</sub>**

**K. Sood**<sup>1</sup>; S. Basu<sup>2</sup>; <sup>1</sup>Thapar University, patiala, Patiala, India; <sup>2</sup>Department of



**03:40 AM Break**

SESSION: **MaterialsForEnergyMonPM2**

**2nd Intl. Symp. on Advanced Materials  
and Technologies for Sustainable  
Energy and the Environment(AMTSEE)**

Mon Nov, 07 2016

Room: **PENINSULA**

Session Chairs: Xiangtao **Yu**; liangliang **huang**; Student Monitor: TBA

**04:05 PM2:** [MaterialsForEnergyMonPM210]

**Time-Dependent Porous Structure Evolution Of NiMo Film Electrodeposited Under Super Gravity Field As Electrocatalyst For Hydrogen Evolution Reaction**

**X. Yu**<sup>1</sup>; **M. Wang**<sup>2</sup>; **Z. Wang**<sup>3</sup>; **X. Gong**<sup>4</sup>; **Z. Guo**<sup>5</sup>; <sup>1</sup>State Key Laboratory of Advanced Metallurgy, University of Science and Technology Beijing, Beijing, China; <sup>2</sup>National Engineering Laboratory for Hydrometallurgical Cleaner Production Technology, Key Laboratory of Green Process and Engineering, Institute of Process Engineering, Chinese Academy of Sciences, Be, Beijing, China; <sup>3</sup>Institute of Process Engineering, Chinese Academy of Sciences, Beijing, China; <sup>4</sup>Institute of Process Engineering, Chinese Academy of Sciences, Beijing, China; <sup>5</sup>State Key Laboratory of Advanced Metallurgy, University of Science and Technology Beijing, Beijing, China;  
Paper Id: 76

**04:30 PM2:** [MaterialsForEnergyMonPM211]

**Determination Of Induction Time And Primary Nucleation Kinetics For Batch Reactive Crystallization Of Calcium Carbonate**

**L. Huang**<sup>1</sup>; <sup>1</sup>China University of Mining & Technology (Beijing), Beijing, China;  
Paper Id: 79

**04:55 PM2:** [MaterialsForEnergyMonPM212]

**Preparations And Modifications Of Niobium-Based Anode Materials For Lithium-Ion Batteries**

**C. Lin**<sup>1</sup>; <sup>1</sup>Hainan University, Haikou, China;  
Paper Id: 324

**05:20 PM2:** [MaterialsForEnergyMonPM213]

**The Technological Process Of Solidification For The Treatment Of Hazardous Waste**

**S. Stefanov**<sup>1</sup>; Pancevo, Serbia and Montenegro (formerly Yugoslavia);  
Paper Id: 23

**05:45 PM Organized Activities**

**08:30 AM - 10:30 PM SUMMIT PLENARY**

**10:30 AM** Break

SESSION: **BatteryMonAM.** **3rd Intl. Symp. on Sustainable Secondary Battery Manufacturing and Recycling**

Mon Nov, 07 2016

Room: **OCEAN**

Session Chairs: Shuqiang **Jiao**; Jiakuan **Yang**; Student Monitor: TBA

**10:55 AM.:** [BatteryMonAM.02] Plenary

**Understanding The Anomalously High Capacity Of Electrode Materials For Li-Ion Batteries**

**W. Yoon**<sup>1</sup>; <sup>1</sup>SUNGKYUNGKWAN UNIVERSITY, Suwon, Korea (Republic of [South] Korea);

Paper Id: 487

**11:20 AM.:** [BatteryMonAM.03] Keynote

**Cathode Materials with High Sulfur Loading for Lithium Sulfur Battery**

**G. Li**<sup>1</sup>; **X. Gao**<sup>1</sup>; **Z. Zhang**<sup>1</sup>; <sup>1</sup>Nankai University, Tianjin, China;

Paper Id: 405

**11:45 AM.:** [BatteryMonAM.04] Invited

**Ion assisted motion conduction in Na batteries**

**J. Maranas**<sup>1</sup>; <sup>1</sup>Penn State University, University Park, United States;

Paper Id: 349

**12:10 AM.:** [BatteryMonAM.05]

**Optimum content of VULCAN 72 for negative plate of VRLA under HRPSoC duty**

**J. Wang**<sup>1</sup>; **J. Yang**<sup>1</sup>; **Y. Hu**<sup>1</sup>; **M. Li**<sup>1</sup>; **W. Yu**<sup>1</sup>; <sup>1</sup>Huazhong University of Science and Technology (HUST), Wuhan, China;

Paper Id: 391

**12:50 PM LUNCH**

SESSION: **BatteryMonPM1** **3rd Intl. Symp. on Sustainable Secondary Battery Manufacturing and Recycling**

Mon Nov, 07 2016

Room: **OCEAN**

Session Chairs: Guoran **Li**; Claudio **Capiglia**; Student Monitor: TBA

**02:00 PM1:** [BatteryMonPM106] Keynote

**Reversible Solid Oxide Fuel Cells: Present Status And Potential Applications**

**P. Aravind**<sup>1</sup>; <sup>1</sup>Delft University of Technology, Delft, Netherlands;

Paper Id: 420

**02:25 PM1:** [BatteryMonPM107]

**Encapsulate Sulfur In Multilateral Graphene Nanosheets For High-Areal-Capacity Lithium Sulfur Batteries**

Y. Ye <sup>1</sup>; J. Qian <sup>1</sup>; R. Chen <sup>1</sup>; F. Wu <sup>1</sup>; <sup>1</sup>Beijing Institute of Technology, Beijing, China;  
Paper Id: 431

**02:50 PM1:** [BatteryMonPM108]

**Leaching And Recycling Of Depleted Lead-Acid Battery Paste. A Hydrometallurgical Route To Generating Nanostructured Lead Oxide**

R. Liu <sup>1</sup>; <sup>1</sup>, Cambridge, Great Britain;  
Paper Id: 484

**03:15 PM1:** [BatteryMonPM109]

**Preparation Of High Purity Lead Oxide From Spent Lead Paste**

W. Yu <sup>1</sup>; J. Yang <sup>1</sup>; Y. Hu <sup>1</sup>; M. Li <sup>1</sup>; J. Wang <sup>1</sup>; <sup>1</sup>Huazhong University of Science and Technology (HUST), Wuhan, China;  
Paper Id: 392

**03:40 AM** Break

SESSION: **BatteryMonPM2**      **3rd Intl. Symp. on Sustainable Secondary Battery Manufacturing and Recycling**

Mon Nov, 07 2016

Room: **OCEAN**

Session Chairs: Chao **Lai**; Renjie **Chen**; Student Monitor: TBA

**04:05 PM2:** [BatteryMonPM210]

**Recovery Of Valuable Metals From Spent Lithium Ion Batteries With Organic Acid Leaching**

Q. Xue <sup>1</sup>; X. Zhang <sup>1</sup>; L. Li <sup>1</sup>; F. Wu <sup>1</sup>; R. Chen <sup>1</sup>; <sup>1</sup>Beijing Institute of Technology, Beijing, China;  
Paper Id: 433

**04:30 PM2:** [BatteryMonPM211]

**The Nano-Scale Design Of Cathode And Interlayer For Advanced Lithium-Sulfur Batteries**

T. Zhao <sup>1</sup>; V. Kumar <sup>1</sup>; <sup>1</sup>University of Cambridge, Cambridge, United Kingdom (Great Britain);  
Paper Id: 432

**04:55 PM2:** [BatteryMonPM212]

**Recycling Of Lead Acid Battery Paste For Producing Nanostructured Materials**

X. He <sup>1</sup>; V. Kumar <sup>2</sup>; J. Yang <sup>3</sup>; <sup>1</sup>University of Cambridge, Cambridge, Great Britain; <sup>2</sup>University of Cambridge, Cambridge, United Kingdom (Great Britain); <sup>3</sup>Huazhong University of Science and Technology (HUST), Wuhan, China;  
Paper Id: 481

**05:20 PM2:** [BatteryMonPM213]

**Unzipped Carbon Nanotubes Via KOH Activation For Energy Storage Devices**

K. Roh <sup>1</sup>; J. Han <sup>2</sup>; <sup>1</sup>Korea institute of ceramic engineering and technology, Jinju-si, Korea (Republic of [South] Korea); <sup>2</sup>Korea institute of ceramic engineering of

**05:45 PM** Organized Activities

**08:30 AM - 10:30 PM** **SUMMIT PLENARY**

**10:30 AM** Break

SESSION:IronMonAM.

**D'Abreu International Symposium (4th Intl. Symp. on  
Advanced Sustainable Iron and Steel Making)**

Mon Nov, 07 2016

Room: **GINKO**

Session Chairs: Jose Carlos **D Abreu**; Student Monitor: Yuansheng **Huang**;

**10:55 AM.:** [IronMonAM.02] Plenary

**Alternatives Binders For Ore-Carbon Composite Agglomerates: An Analysis**

**C. Takano**<sup>1</sup>; C. Narita<sup>2</sup>; M. Mourao<sup>1</sup>; <sup>1</sup>University of Sao Paulo, Sao Paulo, Brazil; <sup>2</sup>Polytechnic School of the University of Sao Paulo, Sao Paulo, Brazil;  
Paper Id: 222

**11:20 AM.:** [IronMonAM.03]

**Thermodynamic Optimization For Reduction Of Iron Ore Fines By CO In A Two-Stage Fluidized Bed Reactor**

**W. Yu**<sup>1</sup>; Z. Zheng<sup>1</sup>; X. He<sup>1</sup>; H. Chen<sup>2</sup>; <sup>1</sup>Chongqing University, Chongqing, China; <sup>2</sup>, Chongqing, China;  
Paper Id: 48

**11:45 AM.:** [IronMonAM.04] Keynote

**Multiphase Mathematical Modeling Of The Direct Reduction Process Based On Shaft Furnace Process**

**J. De Castro**<sup>1</sup>; E. Pinto Da Rocha<sup>2</sup>; A. Santos Francisco<sup>3</sup>; E. Oliveira<sup>4</sup>; L. Rollim Lopes<sup>3</sup>; C. Hosken<sup>3</sup>; <sup>1</sup>UFF - Federal Fluminense University, Volta Redonda, Brazil; <sup>2</sup>, Volta Redonda, Brazil; <sup>3</sup>UFF, Volta Redonda, Brazil; <sup>4</sup>Center for Technological Education Celso Suckow da Fonseca, Valença, Brazil;  
Paper Id: 184

**12:10 AM.:** [IronMonAM.05]

*[Oxygen applications for sustainable steelmaking/steel melting]* **Characteristics And Origins Of Oxide Inclusions In Bearing Steel Used For High-Power Wind Turbines During Different Process**

**Y. Li**<sup>1</sup>; Z. Xue<sup>2</sup>; Y. Li<sup>1</sup>; <sup>1</sup>Wuhan University of Science and Technology, Wuhan, China; <sup>2</sup>The State Key Laboratory of Refractories and Metallurgy, Wuhan University of Science and Technology, WuHan, China;  
Paper Id: 82

**12:50 PM** LUNCH

SESSION:IronMonPM1 **D'Abreu International Symposium (4th Intl. Symp. on  
Advanced Sustainable Iron and Steel Making)**

Mon Nov, 07 2016 Room: **GINKO**

Session Chairs: Cyro **Takano**; Fernando **Lins**; Student

Monitor: Sandile **Nkwanyana**;

**02:00 PM1:** [IronMonPM106]

**Super-Hydrophilic Ni-TiO<sub>2</sub>/TiO<sub>2</sub> Multilayer Coating as an Active Photo-catalyst**

**S. Mohajeri**<sup>1</sup>; <sup>1</sup>Mapna, Tehran, Iran (Islamic Republic of Iran);

Paper Id: 458

**02:25 PM1:** [IronMonPM107]

**The Mathematical Model of Thermal Processes in a Hearth Laying of the Blast Furnaces of China**

**A. Dmitriev**<sup>1</sup>; <sup>1</sup>Institute of Metallurgy, Ural Federal University, Ekaterinburg, Russian Federation;

Paper Id: 104

**02:50 PM1:** [IronMonPM108]

**Inclusions Behavior In The Tire Cord Steel During The Solidification Process**

**Q. Li**<sup>1</sup>; **G. Ma**<sup>2</sup>; **Z. Zhu**<sup>3</sup>; <sup>1</sup>Key Laboratory for Ferrous Metallurgy and Resources Utilization of Ministry of Education, Wuhan University of Science and Technology, wuhan, China; <sup>2</sup>Key Laboratory for Ferrous Metallurgy and Resources Utilization of Ministry of Education, Wuhan University of Science and Technology, Wuhan 430081, China; <sup>3</sup>The State Key Laboratory of Refractories and Met, wuhan, China; <sup>3</sup>Wuhan University of Science and Technology, wuhan, China;

Paper Id: 145

**03:15 PM1:** [IronMonPM109]

**Investigation of Longevity for Blast Furnace**

**Z. Wang**<sup>1</sup>; **Z. Liu**<sup>2</sup>; **T. Yang**<sup>3</sup>; **J. Zhang**<sup>1</sup>; <sup>1</sup>School of Metallurgical and Ecological Engineering, University of Science and Technology Beijing, Beijing, China; <sup>2</sup>school of Metallurgical and Ecological Engineering, University of Science and Technology Beijing, Beijing, China; <sup>3</sup>University of Science and Technology Beijing, Beijing, China;

Paper Id: 151

**03:40 AM** Break

SESSION:IronMonPM2 **D'Abreu International Symposium (4th Intl. Symp. on  
Advanced Sustainable Iron and Steel Making)**

Mon Nov, 07 2016 Room: **GINKO**

Session Chairs: Cyro **Takano**; Fernando **Lins**; Student Monitor: TBA

**04:05 PM2:** [IronMonPM210]

**State-of-Art and Physicochemical Bases of Pyrometallurgical Processing of**

## **Titanomagnetite Raw Materials**

**A. Dmitriev**<sup>1</sup>; <sup>1</sup>Institute of Metallurgy, Ural Federal University, Ekaterinburg, Russian Federation;  
Paper Id: 103

**04:30 PM2:** [IronMonPM211]

### **Physical Modeling On The Migration Behavior Of Gas Bubbles In The Metallurgical Melt**

**Y. Huang**<sup>1</sup>; **G. Ma**<sup>2</sup>; **P. Cheng**<sup>3</sup>; **Y. Cao**<sup>3</sup>; **L. Meng**<sup>3</sup>; <sup>1</sup>Key Laboratory for Ferrous Metallurgy and Resources Utilization of Ministry of Education, Wuhan University of Science and Technology, Wuhan, China; <sup>2</sup>Key Laboratory for Ferrous Metallurgy and Resources Utilization of Ministry of Education, Wuhan University of Science and Technology, Wuhan 430081, China; <sup>3</sup>The State Key Laboratory of Refractories and Met, wuhan, China; <sup>3</sup>Wuhan University of Science and Technology, Wuhan, China;  
Paper Id: 112

**04:55 PM2:** [IronMonPM212] Plenary

### **Sustainable Processing of Liquid Steel and Alloys Using Waste Material from the Aluminum Industry**

**Y. Yang**<sup>1</sup>; **M. Barati**<sup>2</sup>; **A. McLean**<sup>2</sup>; <sup>1</sup>Department of Materials Science & Engineering, University of Toronto, Toronto, Canada; <sup>2</sup>Department of Materials Science & Engineering, University of Toronto, Toronto, Canada;  
Paper Id: 224

**05:20 PM2:** [IronMonPM213]

### **Kinetics Study Of The Zinc Ferrite Formation**

**M. Gomez Marroquin**<sup>1</sup>; **J. D Abreu**<sup>2</sup>; <sup>1</sup>Universidad Nacional de Ingenieria-UNI, Lima, Peru; <sup>2</sup>PUC-Rio, Rio de Janeiro, Brazil;  
Paper Id: 191

**05:45 PM** Organized Activities

**08:30 AM - 10:30 PM** **SUMMIT PLENARY**

**10:30 AM** Break

SESSION: **MetalsMonAM.**

**Yagi International Symposium (2nd Intl. Symp. on Sustainable Metals & Alloys Processing)**

Mon Nov, 07 2016

Room: **Salon III/IV**

Session Chairs: **Yoshiyuki Matsui**; Student Monitor: **Jue Tang**;

**10:55 AM.:** [MetalsMonAM.02] Plenary

### **Recent Progress in NSSMC Ironmaking Technologies**

**K. Saito**<sup>1</sup>; <sup>1</sup>Nippon Steel & Sumitomo Metals Coporation, Futtsu City, Japan;  
Paper Id: 12

**11:20 AM.:** [MetalsMonAM.03] Plenary

### **Development Of Technologies For Environmentally Harmonized Steelmaking Process**

**S. Tonomura**<sup>1</sup>; N. Kikuchi<sup>2</sup>; N. Ishiwata<sup>3</sup>; S. Tomisaki<sup>4</sup>; Y. Tomita<sup>5</sup>; <sup>1</sup>Nippon Steel & Sumitomo Metal Corporation, Tokyo, Japan; <sup>2</sup>Kobe Steel, Ltd., Arai-cho Takasago, Japan; <sup>3</sup>JFE Steel Corporation, Chiyoda-ku, Japan; <sup>4</sup>Nippon Steel & Sumikin Engineering Co., Ltd., Kitakyushu, Japan; <sup>5</sup>Nisshin Steel Co., Ltd., Chiyoda-ku, Japan;  
Paper Id: 16

**11:45 AM.:** [MetalsMonAM.04]

**Exergy Efficiency of Steelworks**

T. Akiyama<sup>1</sup>; J. Yagi<sup>2</sup>; **H. Nogami**<sup>2</sup>; <sup>1</sup>Hokkaido University, Sapporo, Japan; <sup>2</sup>Tohoku University, Sendai, Japan;  
Paper Id: 69

**12:10 AM.:** [MetalsMonAM.05]

**Numerical Simulation of Hearth Cooling during an Extended Blast Furnace Shutdown**

**X. Dong**<sup>1</sup>; P. Zulli<sup>2</sup>; M. Biasutti<sup>2</sup>; <sup>1</sup>, Kensington, Australia; <sup>2</sup>BlueScope Ltd, Port Kembla, Australia;  
Paper Id: 44

**12:50 PM LUNCH**

<b>SESSION:MetalsMonPM1</b>	<b>Yagi International Symposium (2nd Intl. Symp. on Sustainable Metals &amp; Alloys Processing)</b>
Mon Nov, 07 2016	Room: <b>Salon III/IV</b>
<u>Session Chairs:</u> Koji <b>Saito</b> ; <u>Student Monitor:</u> Xuefeng (John) <b>Dong</b> ;	

**02:00 PM1:** [MetalsMonPM106]

**Development Of Visualizing System And Control Technology For Stability Of Blast Furnace Operation**

**S. Matsuzaki**<sup>1</sup>; <sup>1</sup>Nippon Steel & Sumitomo Metal Corporation, Futtsu, Japan;  
Paper Id: 74

**02:25 PM1:** [MetalsMonPM107] Invited

**Improving The Use Of Pulverized Coal In Blast Furnaces**

**V. Kochura**<sup>1</sup>; <sup>1</sup>Donetsk National Technical University, Donetsk, Ukraine;  
Paper Id: 179

**02:50 PM1:** [MetalsMonPM108] Keynote

**Numerical Study Of The Charcoal Mini Blast Furnace Using Rich Hydrogen Gas Injection In Multiple Tuyere Levels And Self-Reducing Burden**

**J. De Castro**<sup>1</sup>; M. De Campos<sup>1</sup>; P. Assis<sup>2</sup>; C. Takano<sup>3</sup>; J. Yagi<sup>4</sup>; <sup>1</sup>UFF - Federal Fluminense University, Volta Redonda, Brazil; <sup>2</sup>UFOP (Federal University of Ouro Preto) / REDEMAT, Ouro Preto, Brazil; <sup>3</sup>University of Sao Paulo, Sao Paulo, Brazil; <sup>4</sup>Tohoku University, Sendai, Japan;  
Paper Id: 187

**03:15 PM1:** [MetalsMonPM109] Invited

**Nickel Pig Iron (NPI) Production From Nickel Laterites Ore By Using A Mini Blast**

## **Furnace (MBF) And Local Resources In Indonesia**

**S. Pintowantoro**<sup>1</sup>; F. Abdul<sup>2</sup>; A. Kawigraha<sup>3</sup>; A. Hapid<sup>3</sup>; <sup>1</sup>Dept. Materials and Metallurgical Engineering, Institut Teknologi Sepuluh Nopember (ITS), Surabaya, Indonesia; <sup>2</sup>Dept. Materials and Metallurgical Engineering, Institut Teknologi Sepuluh Nopember (ITS), Surabaya, Indonesia; <sup>3</sup>Minerals Technology Centre Badan Pengkajian dan Penerapan Teknologi (BPPT), Jakarta, Indonesia;  
Paper Id: 43

### **03:40 AM Break**

<b>SESSION:MetalsMonPM2</b>	<b>Yagi International Symposium (2nd Intl. Symp. on Sustainable Metals &amp; Alloys Processing)</b>
Mon Nov, 07 2016	Room: <b>Salon III/IV</b>
<u>Session Chairs:</u> Fengman <b>Shen</b> ; <u>Student Monitor:</u> Rijin <b>Cheng</b> ;	

### **04:05 PM2:** [MetalsMonPM210]

#### **Influence of Reducing Gas Composition on Disintegration Behavior of Blast Furnace Burden**

**M. Mizutani**<sup>1</sup>; T. Nishimura<sup>2</sup>; T. Orimoto<sup>2</sup>; K. Higuchi<sup>2</sup>; S. Nomura<sup>3</sup>; K. Saito<sup>4</sup>; E. Kasai<sup>5</sup>; <sup>1</sup>Nippon Steel & Sumitomo Metal Corporation, Futtsu, Japan; <sup>2</sup>Nippon Steel & Sumitomo Metal Corporation, Futtsu, Japan; <sup>3</sup>Nippon Steel and Sumitomo Metal Corporation, Futtsu, Japan; <sup>4</sup>Nippon Steel & Sumitomo Metals Coporation, Futtsu City, Japan; <sup>5</sup>Graduate School of Environmental Studies, Tohoku University, Sendai, Japan;  
Paper Id: 2

### **04:30 PM2:** [MetalsMonPM211]

#### **Experimental Investigation of the Effects of Zinc on Burden Materials Metallurgical Properties and Primary Slag Formation of the Blast Furnace**

**X. Bi**<sup>1</sup>; <sup>1</sup>Wuhan University of Science and Technology, Wuhan, China;  
Paper Id: 45

### **04:55 PM2:** [MetalsMonPM212]

#### **Numerical Simulation of Titanium Compounds in Blast Furnace Hearth for Titanium-bearing Wire Injection**

**Z. Li**<sup>1</sup>; **M. Cao**<sup>2</sup>; **W. Guo**<sup>1</sup>; **G. Qiangjian**<sup>1</sup>; **S. Fengman**<sup>1</sup>; <sup>1</sup>School of Metallurgy, Northeastern University, Shenyang, China; <sup>2</sup>School of Metallurgy, Northeastern University, Shenyang, China;  
Paper Id: 31

### **05:20 PM2:** [MetalsMonPM213]

#### **Investigation Of The Viscous Behaviors Of Titanium-Bearing Slag**

**M. Chu**<sup>1</sup>; **C. Feng**<sup>2</sup>; **J. Tang**<sup>1</sup>; **J. Qin**<sup>1</sup>; **F. Li**<sup>1</sup>; **Z. Liu**<sup>1</sup>; <sup>1</sup>Northeastern University, Shenyang, China; <sup>2</sup>, Shenyang, China;  
Paper Id: 25

### **05:45 PM Organized Activities**



08:30 AM - 10:30 PM **SUMMIT PLENARY** ([Click to view](#))

10:30 AM Break

SESSION: **MetallicMonAM.**

**Dubois International Symposium (Intl. Symp. on Sustainable Complex Metallic Systems)**

Mon Nov, 07 2016

Room: **PALM**

Session Chairs: Chuang **Dong**; Student Monitor: Witor **Wolf**;

**10:55 AM.:** [MetallicMonAM.02] Keynote

**Synthesis And Structural Characterization Of Epitaxial KNb3O8 and K4Nb6O17 Thin Films On (100)SrTiO3**

**V. Demange**<sup>1</sup>; A. Waroquet<sup>2</sup>; M. Guilloux Viry<sup>2</sup>; <sup>1</sup>CNRS, Rennes, France; <sup>2</sup>ISCR, Rennes, France;

Paper Id: 334

**11:20 AM.:** [MetallicMonAM.03] Invited

**High-Resolution Transmission Electron Microscopy and Spectroscopy of Nanostructures and Interfaces in Metallic Systems**

**S. Sturm**<sup>1</sup>; K. Zuzek Rozman<sup>2</sup>; B. Markoli<sup>3</sup>; K. Zagar<sup>4</sup>; P. Boulet<sup>5</sup>; M. De Weerd<sup>6</sup>; J. Dubois<sup>6</sup>; J. Ledieu<sup>7</sup>; S. Kobe<sup>8</sup>; <sup>1</sup>Jozef Stean Institute, Ljubljana, Slovenia; <sup>2</sup>Jozef Stefan Institute, Ljubljana, Slovenia; <sup>3</sup>, Ljubljana, Slovenia; <sup>4</sup>Jozef Stefan Institute, Ljubljana, Slovenia; <sup>5</sup>Institut Jean Lamour, NANCY, France; <sup>6</sup>Institut Jean Lamour, Nancy, France; <sup>7</sup>Institut Jean Lamour UMR7198 CNRS - Universite de Lorraine, Nancy 54011, France; <sup>8</sup>Josef Stefan Institute, Ljubljana, Slovenia;

Paper Id: 244

**11:45 AM.:** [MetallicMonAM.04] Plenary

**Developing a TEM-based Nanolab for Materials Research**

**L. Sun**<sup>1</sup>; <sup>1</sup>Southeast University, Nanjing, China;

Paper Id: 497

**12:10 AM.:** [MetallicMonAM.05] Plenary

**Developing a TEM-based Nanolab for Materials Research**

**L. Sun**<sup>1</sup>; <sup>1</sup>Southeast University, Nanjing, China;

Paper Id: 434

12:50 PM LUNCH

SESSION: **MetallicMonPM1**      **Dubois International Symposium (Intl. Symp. on Sustainable Complex Metallic Systems)**

Mon Nov, 07 2016

Room: **PALM**

Session Chairs: Michael **Zehetbauer**; Student Monitor: Pengfei **Zhan**;

**02:00 PM1:** [MetallicMonPM106] Keynote

**Tailoring Structure Formation and Properties of Complex Metallic Materials**

**J. Eckert**<sup>1</sup>; <sup>1</sup>Erich Schmid institute of Materials Science, Leoben, Austria;

Paper Id: 165

**02:25 PM1:** [MetallicMonPM107] Keynote

**Application of EBSD on Quasicrystal: Growth of Eutectic QC/Mg**

**A. Tsai**<sup>1</sup>; **R. Tanaka**<sup>2</sup>; **S. Ohhashi**<sup>2</sup>; **M. Demura**<sup>3</sup>; **A. Yamamoto**<sup>3</sup>; <sup>1</sup>Tohoku

University, Sendai, Japan; <sup>2</sup>Tohoku University, Sendai, Japan; <sup>3</sup>National Institute for Materials Science, Tsukuba, Japan;

Paper Id: 130

**02:50 PM1:** [MetallicMonPM108] Invited

**Can Quasicrystalline Alloys Be Of Any Use?**

**B. Markoli**<sup>1</sup>; <sup>1</sup>Ljubljana, Slovenia;

Paper Id: 113

**03:15 PM1:** [MetallicMonPM109]

**Development Of A Co-Free Superhigh Strength Maraging Stainless Steel**

**C. Bao**<sup>1</sup>; **Q. Wang**<sup>2</sup>; **C. Dong**<sup>2</sup>; <sup>1</sup>Shenyang blower works group company, Dalian, China; <sup>2</sup>Dalian University of Technology, Dalian, China;

Paper Id: 199

**03:40 AM** Break

SESSION: **MetallicMonPM2**      **Dubois International Symposium (Intl. Symp. on Sustainable Complex Metallic Systems)**

Mon Nov, 07 2016

Room: **PALM**

Session Chairs: Valerie **Demange**; Student Monitor: TBA

**04:05 PM2:** [MetallicMonPM210] Keynote

**Composition Formulas Of Quasicrystal, Metallic Glasses, And Solid Solutions**

**C. Dong**<sup>1</sup>; <sup>1</sup>Dalian University of Technology, Dalian, China;

Paper Id: 189

**04:30 PM2:** [MetallicMonPM211]

**Correlation between Semiconductor Properties and Local Cluster Structures of Amorphous Fe-Si Films**

**X. Li**<sup>1</sup>; **L. Jin**<sup>1</sup>; **Y. Zheng**<sup>1</sup>; **C. Dong**<sup>1</sup>; <sup>1</sup>Dalian University of Technology, Dalian, China;

Paper Id: 81

**04:55 PM2:** [MetallicMonPM212]

**Chemical Short-Range Order Origin Of Specific Compositions Of Industrial Alloys**

**H. Hong**<sup>1</sup>; **Q. Wang**<sup>2</sup>; **C. Dong**<sup>2</sup>; <sup>1</sup>Sanming University, Sanming, China; <sup>2</sup>Dalian University of Technology, Dalian, China;

Paper Id: 196

**05:20 PM2:** [MetallicMonPM213]

**Composition Formulas For Eutectic Liquids Issued From Cluster-Plus-Glue-Atom Model**

**Y. Ma**<sup>1</sup>; **D. Dong**<sup>2</sup>; **C. Dong**<sup>2</sup>; <sup>1</sup>Hainan University, Haikou, China; <sup>2</sup>Dalian University of Technology, Dalian, China;

Paper Id: 195

**05:45 PM** Organized Activities

**08:30 AM - 10:30 PM** **SUMMIT PLENARY**

**10:30 AM** Break

<b>SESSION:AluminumMonAM.</b>	<b>Øye International Symposium (Intl. Symp. on Sustainable Ionic Liquid and Aluminum Extraction and Processing)</b>
Mon Nov, 07 2016	Room: <b>HERB 1</b>
<u>Session Chairs:</u> Naixiang <b>Feng</b> ; <u>Student Monitor:</u> TBA	

**10:55 AM.:** [AluminumMonAM.02] Plenary

**State of the Aluminium Electrolysis Industry and Recent Innovations**

**H. Oye**<sup>1</sup>; <sup>1</sup>NTNU, Trondheim, Norway;

Paper Id: 404

**11:20 AM.:** [AluminumMonAM.03]

**Physical Chemical Properties of the Cryolite-alumina Molten Salts with Additives of KF and LiF**

**B. Gao**<sup>1</sup>; **Y. Zhang**<sup>2</sup>; **N. Feng**<sup>1</sup>; **Z. Wang**<sup>3</sup>; **Z. Shi**<sup>3</sup>; **X. Hu**<sup>3</sup>; <sup>1</sup>, Shenyang, China; <sup>2</sup>Shenyang University of Chemical Technology, Shenyang, China; <sup>3</sup>Northeastern University, Shenyang, China;

Paper Id: 300

**11:45 AM.:** [AluminumMonAM.04]

**Zinc Electroplating In The Zinc Oxide-Urea-1-Ethyl-3-Methylimidazolium Chloride System at 333 K to 363 K**

**W. He**<sup>1</sup>; **Z. Shi**<sup>2</sup>; **B. Gao**<sup>1</sup>; **X. Hu**<sup>2</sup>; **Z. Wang**<sup>2</sup>; <sup>1</sup>, Shenyang, China; <sup>2</sup>Northeastern University, Shenyang, China;

Paper Id: 129

**12:10 AM.:** [AluminumMonAM.05]

**Development and Application of NEUI's High Amperage Aluminum Electrolysis**

## Technology

**Y. Ban**<sup>1</sup>; **Y. Mao**<sup>2</sup>; **J. Liu**<sup>2</sup>; **G. Chen**<sup>2</sup>; <sup>1</sup>Northeastern University Engineering & Research Institute Co., Ltd., Shenyang, China; <sup>2</sup>Northeastern University Engineering & Research Institute Co., Ltd., Shenyang, China;  
Paper Id: 60

### 12:50 PM LUNCH

#### Øye International Symposium (Intl. Symp. on Sustainable Ionic Liquid and Aluminum Extraction and Processing)

SESSION:AluminumMonPM1

Mon Nov, 07 2016

Room: **HERB 1**

Session Chairs: Jilai **Xue**; Student Monitor: TBA

**02:00 PM1:** [AluminumMonPM106]

#### **Structural Characterization Of NaF-AlF<sub>3</sub>-CaF<sub>2</sub> Melts In Refined Aluminum Electrolysis By High Temperature Raman Spectroscopy**

**X. Hu**<sup>1</sup>; **J. Liu**<sup>1</sup>; **G. Li**<sup>1</sup>; **B. Gao**<sup>2</sup>; **Z. Shi**<sup>1</sup>; **J. Yu**<sup>1</sup>; **Z. Wang**<sup>1</sup>; <sup>1</sup>Northeastern University, Shenyang, China; <sup>2</sup>, Shenyang, China;  
Paper Id: 131

**02:25 PM1:** [AluminumMonPM107]

#### **Spent Heat Recovery For Sustainable Development Of Hall-Heroult Process**

**W. Tao**<sup>1</sup>; **Z. Wang**<sup>1</sup>; **Z. Shi**<sup>1</sup>; **X. Hu**<sup>1</sup>; **B. Gao**<sup>2</sup>; <sup>1</sup>Northeastern University, Shenyang, China; <sup>2</sup>, Shenyang, China;  
Paper Id: 114

**02:50 PM1:** [AluminumMonPM108]

#### **Calcification- Carbonation Method for Comprehensive Utilization of Low-grade Bauxite and Bayer Red Mud**

**T. Zhang**<sup>1</sup>; **L. Guozhi**<sup>1</sup>; **W. Zhang**<sup>2</sup>; **Z. Xiaofeng**<sup>1</sup>; **L. Yan**<sup>1</sup>; **Y. Wang**<sup>2</sup>; **D. Zhihe**<sup>1</sup>; **Z. Qiuyue**<sup>1</sup>; <sup>1</sup>Northeastern University, China, Shenyang, China; <sup>2</sup>Northeastern University, Shenyang, China;  
Paper Id: 94

**03:15 PM1:** [AluminumMonPM109]

#### **Harmless Treatment And Resource Recovery On Spent Cathode Of Aluminum Reduction**

**J. Yin**<sup>1</sup>; **Y. Tian**<sup>1</sup>; **J. An**<sup>2</sup>; **X. Xiaoyan**<sup>1</sup>; **X. Wentang**<sup>1</sup>; **X. Yuan**<sup>3</sup>; **N. Deng**<sup>4</sup>; <sup>1</sup>, Chongqing, China; <sup>2</sup>School of Metallurgical and Materials Engineering, University of Science and Technology, Chongqing, China; <sup>3</sup>, chongqing, China; <sup>4</sup>Chongqing University of Science & Technology, Chongqing, China;  
Paper Id: 135

### 03:40 AM Break

SESSION:AluminumMonPM2

Øye International Symposium (Intl. Symp. on  
Sustainable Ionic Liquid and Aluminum  
Extraction and Processing)

Mon Nov, 07 2016

Room: HERB 1

Session Chairs: Olga Tkacheva; Student Monitor: TBA

**04:05 PM2:** [AluminumMonPM210]

**Calcified Transformation of Iron and Titanium in the Calcification - Carbonization Process for Alumina Production**

**Y. Wang**<sup>1</sup>; T. Zhang<sup>2</sup>; L. Guozhi<sup>2</sup>; Y. Fu<sup>1</sup>; Z. Xiaofeng<sup>2</sup>; W.

Zhang<sup>1</sup>; <sup>1</sup>Northeastern University, Shenyang, China; <sup>2</sup>Northeastern University, China, Shenyang, China;

Paper Id: 96

**04:30 PM2:** [AluminumMonPM211]

**Preparation and Thermodynamics Mechanism of Activated alumina Powders via Spray pyrolysis**

**L. Wang**<sup>1</sup>; T. Zhang<sup>2</sup>; L. Guozhi<sup>2</sup>; Z. Xiaofeng<sup>2</sup>; W. Zhang<sup>1</sup>; S.

Ma<sup>1</sup>; <sup>1</sup>Northeastern University, Shenyang, China; <sup>2</sup>Northeastern University, China, Shenyang, China;

Paper Id: 97

**04:55 PM2:** [AluminumMonPM212]

**Electrodeposition Of Aluminum And Aluminum-Magnesium Alloys**

**H. Kan**<sup>1</sup>; <sup>1</sup>Shenyang university, Shenyang, China;

Paper Id: 63

**05:20 PM2:** [AluminumMonPM213]

**Comprehensive Utilization Of Fe-Al Associated Ore Based On Carbothermic Reduction**

**X. Pan**<sup>1</sup>; <sup>1</sup>, Shenyang, China;

Paper Id: 101

**05:45 PM** Organized Activities

**08:30 AM - 10:30 PM SUMMIT PLENARY**

**10:30 AM** Break

SESSION: **MathematicsMonAM.**

**Santilli International Symposium (Intl. Symp.  
on Sustainable Mathematics Applications)**

Mon Nov, 07 2016

Room: **Salon II**

Session Chairs: Erik **Trell**; Student Monitor: TBA

**10:55 AM.:** [MathematicsMonAM.02] Plenary

**Outline Of The New Era In Mathematics And Its Applications To New Sustainable Energies**

**P. Santilli**<sup>1</sup>; <sup>1</sup>Thunder Energies Corporation, Tarpon Springs, United States;  
Paper Id: 430

**11:20 AM.:** [MathematicsMonAM.03]

**Santilli's Isomathematics**

**A. Muktibodh**<sup>1</sup>; <sup>1</sup>Mohota College of Science, Nagpur, India;  
Paper Id: 214

**11:45 AM.:** [MathematicsMonAM.04]

**The Jiang Periodic Table Of Elements**

**C. Jiang**<sup>1</sup>; <sup>1</sup>xxx, Beijing, China;  
Paper Id: 384

SESSION: **MathematicsMonPM1**

**Santilli International Symposium (Intl. Symp.  
on Sustainable Mathematics Applications)**

Mon Nov, 07 2016

Room: **Salon II**

Session Chairs: Stein E. **Johansen**; Student Monitor: TBA

**02:00 PM1:** [MathematicsMonPM106] Plenary

**Hyper Lie-Santilli Admissibility**

**T. Vougiouklis**<sup>1</sup>; <sup>1</sup>Democritus University of Thrace, Xanthi, Greece;  
Paper Id: 502

**02:25 PM1:** [MathematicsMonPM107] Plenary

**Introduction to Partial Iso-Differential Equations**

**S. Georgiev**<sup>1</sup>; <sup>1</sup>Sorbonne University, Paris, France;  
Paper Id: 446

**02:50 PM1:** [MathematicsMonPM108]

**Isonilpotents and Self-Organization**

**P. Rowlands**<sup>1</sup>; <sup>1</sup>University of Liverpool, Liverpool, United Kingdom (Great Britain);  
Paper Id: 278

**03:15 PM1:** [MathematicsMonPM109]

**Helix-Hopes On Finite Hv-Fields**

**T. Vougiouklis**<sup>1</sup>; S. Vougiouklis<sup>2</sup>; <sup>1</sup>Democritus University of Thrace, Xanthi, Greece; <sup>2</sup>musician, Athens, Greece;  
Paper Id: 441

**03:40 AM Break**

<b>SESSION:MathematicsMonPM2</b>	<b>Santilli International Symposium (Intl. Symp. on Sustainable Mathematics Applications)</b>
Mon Nov, 07 2016	Room: <b>Salon II</b>
<u>Session Chairs:</u> Anil <b>Bhalekar</b> ; <u>Student Monitor:</u> TBA	

**04:05 PM2:** [MathematicsMonPM210]

**Iso-Integral Equations**

**S. Georgiev**<sup>1</sup>; <sup>1</sup>Sorbonne University, Paris, France;  
Paper Id: 445

**04:30 PM2:** [MathematicsMonPM211]

**Hypernumbers, Finite Hyper-Fields**

**T. Vougiouklis**<sup>1</sup>; <sup>1</sup>Democritus University of Thrace, Xanthi, Greece;  
Paper Id: 442

**04:55 PM2:** [MathematicsMonPM212]

**Isorepresentations of Lie-Santilli Isoalgebras**

**A. Muktibodh**<sup>1</sup>; <sup>1</sup>Mohota College of Science, Nagpur, India;  
Paper Id: 511

**08:30 AM - 10:30 PM SUMMIT PLENARY**

**10:30 AM Break**

	<b>Yang International Symposium (3rd Intl. Symp. on</b>
<b>SESSION:MultiscaleMonAM.</b>	<b>Multiscale Material Mechanics and Multiphysics and Sustainable Applications)</b>
Mon Nov, 07 2016	Room: <b>Salon I/V</b>
<u>Session Chairs:</u> Ting <b>Zhu</b> ; <u>Student Monitor:</u> Xingran <b>Zhang</b> ;	

**10:55 AM.:** [MultiscaleMonAM.02]

**Atomistic Modeling Of History-Independent Cyclic Fatigue Of Nanotwinned Metals Governed By Correlated Necklace Dislocations**

H. Zhou<sup>1</sup>; **H. Gao**<sup>1</sup>; <sup>1</sup>Brown Univ, Providence, United States;  
Paper Id: 250

**11:20 AM.:** [MultiscaleMonAM.03]

**[Defects on solids] In-Situ Mechanics Under Transmission Electron Microscope**

**S. Mao**<sup>1</sup>; <sup>1</sup>University of Pittsburgh, Pittsburgh, United States;  
Paper Id: 450

**11:45 AM.:** [MultiscaleMonAM.04]

[*Dislocation Patterning*] **Dislocation-Based Discrete-Continuous Crystal Plasticity Model At Submicron Scale**

**Z. Zhuang**<sup>1</sup>; <sup>1</sup>Tsinghua University, Beijing, China;

Paper Id: 358

**12:10 AM.:** [MultiscaleMonAM.05]

[*Defects on solids*] **Power-Law Singularity Characteristics Of Damage And Failure Of Nano-Particle Ceramic Coating Systems**

**Y. Wei**<sup>1</sup>; <sup>1</sup>Institute of Mechanics, Beijing, China;

Paper Id: 299

**12:50 PM LUNCH**

**Yang International Symposium (3rd Intl. Symp.  
on Multiscale Material Mechanics and  
Multiphysics and Sustainable Applications)**

SESSION:**MultiscaleMonPM1**

Mon Nov, 07 2016

Room: **Salon IV**

Session Chairs: Henry **Tan**; Student Monitor: Junbing **Xiao**;

**02:00 PM1:** [MultiscaleMonPM106]

[*Coupled Continuum Mechanics*] **Multi-Field Coupling Effect In Functional Materials And Energy Materials**

**D. Fang**<sup>1</sup>; J. Hong<sup>1</sup>; <sup>1</sup>Beijing Institute of Technology, Beijing, China;

Paper Id: 509

**02:25 PM1:** [MultiscaleMonPM107] Plenary

[*Multiscale Computational Mechanics*] **Dynamics of Full Dislocation-density Functions from Coarse-graining Discrete Dislocation Density-vector Fields**

**A. Ngan**<sup>1</sup>; H. Leung<sup>2</sup>; K. Siu<sup>2</sup>; <sup>1</sup>University of Hong Kong, Pokfulam, Hong Kong (Special Administrative Region of China); <sup>2</sup>University of Hong Kong, Hong Kong, Hong Kong (Special Administrative Region of China);

Paper Id: 357

**02:50 PM1:** [MultiscaleMonPM108]

[*Gradient Elasticity*] **Peridynamic Green's Functions for Elasticity and Diffusion**

**J. Wang**<sup>1</sup>; <sup>1</sup>Peking University, Beijing, China;

Paper Id: 480

**03:15 PM1:** [MultiscaleMonPM109]

[*Multiscale Computational Mechanics*] **Void Behaviors From Low To High Triaxialities: Transition From Void Collapse To Void Coalescence**

**T. Guo**<sup>1</sup>; <sup>1</sup>Institute of High Performance Computing, Singapore, Singapore;

Paper Id: 252

**03:40 AM Break**



SESSION:**MultiscaleMonPM2** **Yang International Symposium (3rd Intl. Symp. on Multiscale Material Mechanics and Multiphysics and Sustainable Applications)**

Mon Nov, 07 2016

Room: **Salon I/V**

Session Chairs: Tianfu **Guo**; Student Monitor: Teng **Zhao**;

**04:05 PM2:** [MultiscaleMonPM210]

**Self-Assembled 3D Shape Formation Induced by Chemical Stimuli**

**K. Hsia**<sup>1</sup>; <sup>1</sup>Carnegie Mellon University, Pittsburgh, United States;

Paper Id: 468

**04:30 PM2:** [MultiscaleMonPM211] Keynote

**In Vivo Surface Roughness Evolution Of A Stressed Metallic Implant**

**H. Tan**<sup>1</sup>; <sup>1</sup>University of Aberdeen, Aberdeen, United Kingdom (Great Britain);

Paper Id: 355

**04:55 PM2:** [MultiscaleMonPM212]

[*Multiscale Computational Mechanics*] **Mechanics Revives in Electrochemistry, Biology and Medicine**

**S. Zhang**<sup>1</sup>; <sup>1</sup>Pennsylvania State University, University Park, United States;

Paper Id: 401

**05:20 PM2:** [MultiscaleMonPM213]

**Rethink Wood: Its Unconventional Applications in Advanced Materials Design**

**T. Li**<sup>1</sup>; <sup>1</sup>University of Maryland, College Park, United States;

Paper Id: 462

**05:45 PM** Organized Activities

**08:30 AM - 10:30 PM** **SUMMIT PLENARY**

**10:30 AM** Break

SESSION:**MineralMonAM.** **Starkey International Symposium (3rd Intl. Symp. on Sustainable Mineral Processing: Principles, Technologies and Industrial Practice)**

Mon Nov, 07 2016

Room: **JASMINE**

Session Chairs: Fisher **Wang**; Norman **Lotter**; Student Monitor: Huali **Wu**;

**10:55 AM.:** [MineralMonAM.02] Plenary

**Delivering Process Design Value To Mining Clients**

**J. Starkey**<sup>1</sup>; <sup>1</sup>Starkey & Associates Inc., Oakville, Canada;

Paper Id: 429

**11:20 AM.:** [MineralMonAM.03] Keynote

**Modern Flowsheet Development for Mineral Processing**

**N. Lotter**<sup>1</sup>; <sup>1</sup>Flowsheets Metallurgical Consulting Incorporated, Sudbury, Canada;  
Paper Id: 356

**11:45 AM.:** [MineralMonAM.04]

**Sustainability In Alumina Production From Bauxite**

**J. Safarian**<sup>1</sup>; L. Kolbeinsen<sup>2</sup>; <sup>1</sup>, Trondheim, Norway; <sup>2</sup>Professor, Trondheim, Norway;  
Paper Id: 86

**12:10 AM.:** [MineralMonAM.05]

**The Application of Nano Steel Magnetic Liner at Erdenet Copper Mine**

**F. Wang**<sup>1</sup>; O. Mejia<sup>2</sup>; B. Klein<sup>3</sup>; <sup>1</sup>University of British Columbia, Vancouver, Canada; <sup>2</sup>HMR Technology Canada Ltd, Vancouver, Canada; <sup>3</sup>UBC, Vancouver, Canada;  
Paper Id: 437

**12:50 PM LUNCH**

<b>Starkey International Symposium (3rd Intl. Symp. on Sustainable Mineral Processing: Principles, Technologies and Industrial Practice)</b>	
<b>SESSION:MineralMonPM1</b>	
Mon Nov, 07 2016	Room: <b>JASMINE</b>
<u>Session Chairs:</u> Bern <b>Klein</b> ; Nadezhda <b>Nikolaeva</b> ; <u>Student Monitor:</u> TBA	

**02:00 PM1:** [MineralMonPM106]

**Investigation Of Ore Properties By Design Of Cycles Of Ore Preparation**

**N. Nikolaeva**<sup>1</sup>; T. Aleksandrova<sup>2</sup>; <sup>1</sup>National mineral resources university, St. Petersburg, Russian Federation; <sup>2</sup>National Mineral Resources University, Sain-Peterburg, Russian Federation;  
Paper Id: 122

**02:25 PM1:** [MineralMonPM107]

**Directional Collection In Bubble Fractionation By Near-Post Meniscus**

**S. Li**<sup>1</sup>; J. Liu<sup>1</sup>; <sup>1</sup>China University of Petroleum (East China), Qingdao, China;  
Paper Id: 267

**02:50 PM1:** [MineralMonPM108]

**Predicting Aggregate Quality For Flexible Road Pavement With Bond Work Index**

**O. Adigun**<sup>1</sup>; B. Adebayo<sup>2</sup>; O. Amu<sup>3</sup>; A. Oladeji<sup>3</sup>; <sup>1</sup>Federal University, Oye, Nigeria; <sup>2</sup>Federal University of Technology, Akure, Nigeria; <sup>3</sup>Federal University, Oye-Ekiti, Nigeria;  
Paper Id: 354

**03:15 PM1:** [MineralMonPM109] Keynote

**Bulk Sorting – A New Paradigm for Large Scale Mining**

**B. Klein**<sup>1</sup>; A. Bamber<sup>2</sup>; <sup>1</sup>UBC, Vancouver, Canada; <sup>2</sup>MineSense Technologies Ltd., Vancouver, Canada;  
Paper Id: 415

**Starkey International Symposium (3rd Intl. Symp.  
on Sustainable Mineral Processing: Principles,  
Technologies and Industrial Practice)**

SESSION: **MineralMonPM2**

Mon Nov, 07 2016

Room: **JASMINE**

Session Chairs: Shanpeng Li; Xiang **Xiaoyan**; Student Monitor: TBA

**04:05 PM2:** [MineralMonPM210]

**Removal Of Phosphorus From High Phosphorus Iron Ores In Wushan Mountain  
By Crosscurrent Acid Leaching**

**X. Xiaoyan**<sup>1</sup>; X. Wentang<sup>1</sup>; X. Yuan<sup>2</sup>; J. Yin<sup>1</sup>; J. An<sup>3</sup>; <sup>1</sup>, Chongqing, China; <sup>2</sup>,  
chongqing, China; <sup>3</sup>School of Metallurgical and Materials Engineering, University of  
Science and Technology, Chongqing, China;

Paper Id: 109

**04:30 PM2:** [MineralMonPM211]

**Quebec Northern Plan For Sustainable Development of Natural Resources**

**F. Kongoli**<sup>1</sup>; <sup>1</sup>Flogen Technologies Inc., Mont-Royal, Canada;

Paper Id: 520

**04:55 PM2:** [MineralMonPM212]

**Experimental Study Of High-Voltage Nanosecond Pulses Effect On The Structure  
Surface And Microhardness Of Kimberlite Rock-Forming Minerals**

**I. Bunin**<sup>1</sup>; V. Chanturiya<sup>1</sup>; N. Anashkina<sup>1</sup>; M. Ryazantseva<sup>1</sup>; E.  
Koporulina<sup>2</sup>; <sup>1</sup>Research Institute of Comprehensive Exploitation of Mineral Resources  
Russian Academy of Science, Moscow, Russian Federation; <sup>2</sup>Institute of  
Comprehensive Exploitation of Mineral Resources, Moscow, Russian Federation;

Paper Id: 14

**05:20 PM2:** [MineralMonPM213]

**Concentration Complexes Polyhydration for the Quinary Reciprocal Systems**

**V. Lutsyk**<sup>1</sup>; V. Vorob'eva<sup>1</sup>; M. Parfenova<sup>2</sup>; <sup>1</sup>Institute of Physical Materials Science  
SB RAS, Ulan-Ude, Russian Federation; <sup>2</sup>Tomsk State University of Control Systems  
and Radio-electronics, Tomsk, Russian Federation;

Paper Id: 148

**05:45 PM** Organized Activities

08:30 AM - 10:30 PM **SUMMIT PLENARY**

10:30 AM Break

SESSION: **MoltenMonAM.** **4th Intl. Symp. on Sustainable Molten Salt and Ionic Liquid Processing**

Mon Nov, 07 2016

Room: **HERB II**

Session Chairs: Catherine **Bessada**; Student Monitor: TBA

**10:55 AM.:** [MoltenMonAM.02]

**Characterization of Fluoride Salt Interaction with Graphite Matrix and Nuclear Graphite**

**H. Wu**<sup>1</sup>; R. Scarlet<sup>2</sup>; <sup>1</sup>UW-Madison, madison, United States; <sup>2</sup>University of Wisconsin-Madison, madison, United States;

Paper Id: 282

**11:20 AM.:** [MoltenMonAM.03]

**Parameters Influence Of Leaching Metals From Complex Raw Materials On The Combined Solutions Characteristics At The Electrochemical Processes**

**R. Sharipov**<sup>1</sup>; B. Kenzhaliyev<sup>1</sup>; A. Berkinbayeva<sup>1</sup>; Z. Dosymbayeva<sup>1</sup>; E. Suleimenov<sup>2</sup>; <sup>1</sup>Kazakh-British Technical University, Almaty, Kazakhstan; <sup>2</sup>Kazakh British Technical University, Almaty, Kazakhstan;

Paper Id: 346

**11:45 AM.:** [MoltenMonAM.04]

**Using The Basic Principles Of M. Faraday To Develop Innovative Technologies**

**B. Utelbayev**<sup>1</sup>; E. Suleimenov<sup>2</sup>; <sup>1</sup>Kazakh-British Technical University, Almaty 050000, Kazakhstan; <sup>2</sup>Kazakh British Technical University, Almaty, Kazakhstan;

Paper Id: 402

**12:10 AM.:** [MoltenMonAM.05]

**Wettability of Molten Carbonate Fuel Cell Materials**

**L. Gao**<sup>1</sup>; R. Selman<sup>2</sup>; P. Nash<sup>3</sup>; <sup>1</sup>Illinois Institute of Technology, Chicago, United States; <sup>2</sup>, Chicago, United States; <sup>3</sup>IIT, Chicago, United States;

Paper Id: 181

12:50 PM LUNCH

SESSION: **MoltenMonPM1** **4th Intl. Symp. on Sustainable Molten Salt and Ionic Liquid Processing**

Mon Nov, 07 2016

Room: **HERB II**

Session Chairs: Viktor **Malyshev**; Student Monitor: TBA

**02:00 PM1:** [MoltenMonPM106]

**Electrochemical Extraction of Anions and Cations from FLiNaK Eutectic Salt**

**H. Wei**<sup>1</sup>; <sup>1</sup>, Shanghai, China;

Paper Id: 107

**02:25 PM1:** [MoltenMonPM107]

**New Materials Based On Ionic Liquids And Their Uses: The View Point Of An SME Specialized In Ionic Liquid Production And R&D.**

**S. Lois**<sup>1</sup>; <sup>1</sup>SOLVIONIC, Toulouse, France;

Paper Id: 85

**02:50 PM1:** [MoltenMonPM108]

**Development Of A Low Pressure Distillation Process For Fluoride Molten Salts Treatment**

**H. Fu**<sup>1</sup>; **D. Qiang**<sup>2</sup>; <sup>1</sup>, Shanghai, China; <sup>2</sup>Shanghai Institute of Applied Physics, Shanghai, China;

Paper Id: 115

**03:15 PM1:** [MoltenMonPM109]

**Structure, Thermophysical And Electrochemical Properties Of Copper Ionic Liquid Analogous**

**F. Sirbu**<sup>1</sup>; **A. Popescu**<sup>2</sup>; **C. Donath**<sup>2</sup>; **V. Constantin**<sup>3</sup>; <sup>1</sup>Institute of Physical Chemistry "Ilie Murgulescu" of the Romanian Academy, Bucharest,, Romania; <sup>2</sup>Ilie Murgulescu Institute of Physical Chemistry, Laboratory of Molten Salts, Bucharest, Romania; <sup>3</sup>Ilie Murgulescu Institute of Physical Chemistry, Bucharest, Romania;

Paper Id: 134

**03:40 AM** Break

SESSION: **MoltenMonPM2** **4th Intl. Symp. on Sustainable Molten Salt and Ionic Liquid Processing**

Mon Nov, 07 2016

Room: **HERB II**

Session Chairs: Slobodan **Gadzuric**; Student Monitor: TBA

**04:05 PM2:** [MoltenMonPM210]

**Thermophysical Properties of Ionic Liquids - ILThermo Archival Database: 4. Sustainable Processing Applications**

**J. Magee**<sup>1</sup>; <sup>1</sup>National Institute of Standards and Technology, Boulder, United States;

Paper Id: 143

**04:30 PM2:** [MoltenMonPM211]

**Experimental Research On The Formation And Controlling Of Molten Salt Frozen-Wall During The Pyroprocessing Of Spent Fuel**

**Z. Jinhao**<sup>1</sup>; <sup>1</sup>, shanghai, China;

Paper Id: 146

**04:55 PM2:** [MoltenMonPM212]

**Elaboration Of 3D Computer Models Of T-X-Y Diagrams And Analysis Of Concentration Fields For The Systems LiF-PuF3-RbF and KF-PuF3-RbF**

**V. Lutsyk**<sup>1</sup>; **A. Zelenaya**<sup>1</sup>; <sup>1</sup>Institute of Physical Materials Science SB RAS, Ulan-Ude, Russian Federation;

Paper Id: 75

**05:20 PM2:** [MoltenMonPM213]

**Eutectic Melt Properties In The Subsystem LiF-NaF-NaNdF<sub>4</sub> Of The Fluoride System Li,Na,Nd|F**

**V. Lutsyk**<sup>1</sup>; A. Zelenaya<sup>1</sup>; A. Omel'chuk<sup>2</sup>; N. Faidyuk<sup>3</sup>; R. Savchuk<sup>4</sup>; <sup>1</sup>Institute of Physical Materials Science SB RAS, Ulan-Ude, Russian Federation; <sup>2</sup>Ukrainian National Academy of Sciences V.I.Vernadsky Institute of General & Inorganic Chemistry, Kyiv-142, Ukraine; <sup>3</sup>V.I. Vernadskiy Institute of General & Inorganic Chemistry of National Academy of Sciences, Kiev, Ukraine; <sup>4</sup>V.I. Vernadskiy Institute of General & Inorganic Chemistry of the National Academy of Sciences, Kiev, Ukraine; Paper Id: 153

**05:45 PM** Organized Activities

## Tuesday:

08:30 AM - 10:30 PM [SUMMIT PLENARY](#)

10:30 AM Break

SESSION: **Non-ferrousTueAM.** **4th Intl. Symp. on Sustainable Non-ferrous Smelting and Hydro/Electrochemical Processing**

Tue Nov, 08 2016 Room: **VANILA**

Session Chairs: Xia Yang **Wang**; Pavel **Kozlov**; Student Monitor: TBA

**10:55 AM.:** [Non-ferrousTueAM.02] Plenary

**Research And Development Of Hydrometallurgical Processing Stage In Copper Industry Wastes' Recycling Technology With Tin Recovery Into Tin Concentrate**

**P. Kozlov**<sup>1</sup>; Y. Reshetnikov<sup>2</sup>; <sup>1</sup>Chelyabinsk Zinc Plant, Chelyabinsk, Russian Federation; <sup>2</sup>PJSC Chelyabinsk Zinc Plant, Chelyabinsk, Russian Federation;  
Paper Id: 217

**11:20 AM.:** [Non-ferrousTueAM.03]

**Study Of Decrease Melting Point Of Mineral Flux SiO<sub>2</sub> In Nonmetallic Compounds Used In Extractive Metallurgy Of Copper**

**C. Gerson Juan**<sup>1</sup>; F. Kongoli<sup>2</sup>; <sup>1</sup>FLOGEN Technologies Inc., Arequipa, Peru; <sup>2</sup>Flogen Technologies Inc., Mont-Royal, Canada;  
Paper Id: 178

**11:45 AM.:** [Non-ferrousTueAM.04]

**Research On Preparation Of Ferric Oxide From Zinc Leaching Slag By Hydrothermal Method**

**X. Wang**<sup>1</sup>; H. Jing<sup>2</sup>; X. Xin Bing<sup>2</sup>; G. Lu Lu<sup>2</sup>; L. Ming Yan<sup>2</sup>; <sup>1</sup>, Changsha, China; <sup>2</sup>Central South University, Changsha, China;  
Paper Id: 243

**12:10 AM.:** [Non-ferrousTueAM.05]

**The Research And Engineering Practice Of The Lead Oxygen-Enriched Flash Smelting**

**C. Wang**<sup>1</sup>; <sup>1</sup>University of Science and Technology Beijing, Beijing, China;  
Paper Id: 236

**12:50 PM LUNCH**

SESSION: **Non-ferrousTuePM1**

**4th Intl. Symp. on Sustainable Non-ferrous Smelting and Hydro/Electrochemical Processing**

Tue Nov, 08 2016

Room: **VANILA**

Session Chairs: Runze **Xu**; Guoyu **Qian**; Student Monitor: TBA

**02:00 PM1:** [Non-ferrousTuePM106]

**The Effect Of  $\text{Na}_2\text{O}$  On The Removal Of Boron And Phosphorus From Silicon Using  $\text{CaO-SiO}_2$  Flux**

**G. Qian**<sup>1</sup>; Z. Wang<sup>1</sup>; J. Cao<sup>1</sup>; Q. Zhao<sup>1</sup>; <sup>1</sup>Institute of Process Engineering, Chinese Academy of Sciences, Beijing, China;

Paper Id: 73

**02:25 PM1:** [Non-ferrousTuePM107]

**Hydrogen Peroxide Catalytic Reduction of Selenate by Sulfur Dioxide and Formation Mechanism Research of Selenium Elementary Substance**

**R. Xu**<sup>1</sup>; <sup>1</sup>Central South University, Changsha, China;

Paper Id: 259

**02:50 PM1:** [Non-ferrousTuePM108] Keynote

**Recovery Of Metals From Zinc Sulfate Solutions In Trepca Company**

**M. Rizaj**<sup>1</sup>; N. Deva<sup>2</sup>; S. Kurshumliu<sup>3</sup>; A. Osmani<sup>4</sup>; E. Obrien<sup>5</sup>; F. Kongoli<sup>6</sup>; E. Obrien<sup>5</sup>; <sup>1</sup>University of Prishtina, Prishtina, Kosovo; <sup>2</sup>Public University of Mitrovice - Isa Boletini - , Faculty of Geosciences, Republic of Kosova, Mitrovice, Kosovo; <sup>3</sup>Trepça mine, AKP, Mitrovica, Kosovo, Mitrovica, Kosovo; <sup>4</sup>, Prishtine, Kosovo; <sup>5</sup>FLOGEN TECHNOLOGIES INC, Wilmington, United States; <sup>6</sup>Flogen Technologies Inc., Mont-Royal, Canada;

Paper Id: 296

**03:15 PM1:** [Non-ferrousTuePM109] Keynote

**The Effect Of Rapid Cooling On Some Flotation Properties Of Copper Smelting Slags**

**Z. Markovic**<sup>1</sup>; S. Magdalinovic<sup>2</sup>; F. Kongoli<sup>3</sup>; E. Obrien<sup>4</sup>; <sup>1</sup>University of Belgrade - Technical Faculty in Bor, Bor, Serbia and Montenegro (formerly Yugoslavia); <sup>2</sup>Institute for Mining and Metallurgy Bor, Bor, Serbia and Montenegro (formerly Yugoslavia); <sup>3</sup>Flogen Technologies Inc., Mont-Royal, Canada; <sup>4</sup>FLOGEN TECHNOLOGIES INC, Wilmington, United States;

Paper Id: 326

**03:40 AM Break**



SESSION: **Non-ferrousTuePM2**

**4th Intl. Symp. on Sustainable Non-ferrous Smelting and Hydro/Electrochemical Processing**

Tue Nov, 08 2016

Room: **VANILA**

Session Chairs: Feng **Xie**; Hongjie **Yan**; Student Monitor: TBA

**04:05 PM2:** [Non-ferrousTuePM210]

**Experimental Investigation on Bubble Formation from Multi-Hole Nozzles**

**H. Yan**<sup>1</sup>; J. Xiao<sup>1</sup>; Z. Hu<sup>2</sup>; <sup>1</sup>Central South University, Changsha, China; <sup>2</sup>, Changsha, China;

Paper Id: 339

**04:30 PM2:** [Non-ferrousTuePM211]

**Feasibility Study On Extraction Of Copper And Cyanide From Waste Cyanide Solutions With Emulsion Liquid Membrane**

**F. Xie**<sup>1</sup>; <sup>1</sup>, Shenyang, China;

Paper Id: 370

**08:30 AM - 10:30 PM** [\*\*SUMMIT PLENARY\*\*](#)

**10:30 AM** Break

SESSION: **EnergyTueAM.**

**3rd Intl. Symp. on Sustainable Energy Production: Gas/Oil/Shale; Coal; Nuclear; Waste/Bioprocessing and renewables: wind/waves**

Tue Nov, 08 2016

Room: **PENINSULA**

Session Chairs: Manfred **Mauntz**; Tatyana **Aleksandrova**; Student Monitor: TBA

**10:55 AM.:** [EnergyTueAM.02] Plenary

**Condition Monitoring of Oil Quality, Oil Aging and Additive Consumption 24/7: Identification of critical operation conditions and determination of the next oil exchange in wind turbines**

**M. Mauntz**<sup>1</sup>; J. Peuser<sup>1</sup>; <sup>1</sup>cmc Instruments GmbH, Eschborn, Germany (Deutschland);

Paper Id: 106

**11:20 AM.:** [EnergyTueAM.03]

**Extraction Of Metals From Non-Traditional Carbonaceous Raw Materials**

**T. Alexandrova**<sup>1</sup>; N. Nikolaeva<sup>2</sup>; A. Aleksandrov<sup>3</sup>; <sup>1</sup>National Mineral Resources University, St. Petersburg, Russian Federation; <sup>2</sup>National mineral resources university, St. Petersburg, Russian Federation; <sup>3</sup>Russian Academy of Sciences, Institute of Mining of Far Eastern Branch, Khabarovsk, Russian Federation;

Paper Id: 121

**11:45 AM.:** [EnergyTueAM.04]

**Metallurgical Analysis Of The Combined Injection Of Pulverized Elephant Grass And Coal Into Blast Furnace**

**R. Dos Santos Oliveira**<sup>1</sup>; P. Assis<sup>2</sup>; C. Campos De Assis<sup>3</sup>; <sup>1</sup>REDEMAT/UFOP,

Ouro Preto, Brazil; <sup>2</sup>UFOP (Federal University of Ouro Preto) / REDEMAT, Ouro Preto, Brazil; <sup>3</sup>CEFET-MG unit Timoteo, Ouro Preto, Brazil;  
Paper Id: 59

**12:10 AM.:** [EnergyTueAM.05]

**Direct Carbon Oxidation In Fuel Cells - DCFC**

**A. Lipilin** <sup>1</sup>; <sup>1</sup>Institute of Electrophysics UD RAS, Ekaterinburg, Russian Federation;

Paper Id: 206

**12:50 PM LUNCH**

<b>3rd Intl. Symp. on Sustainable Energy Production: Gas/Oil/Shale; Coal; Nuclear; Waste/Bioprocessing and renewables: wind/waves</b>	
<b>SESSION:EnergyTuePM1</b>	
Tue Nov, 08 2016	Room: <b>PENINSULA</b>
<u>Session Chairs:</u> Jean Nirinarison <b>Razafinjaka</b> ; Xiao-Dong <b>Liang</b> ; <u>Student</u>	
<u>Monitor:</u> TBA	

**02:00 PM1:** [EnergyTuePM106]

**Polynomial RST Controller With IP Structure For Doubly Fed Induction Generator Used In A Chain Of Wind Power Conversion**

**J. Razafinjaka** <sup>1</sup>; T. Andrianantenaina <sup>2</sup>; <sup>1</sup>E. S. Polytechnique, Diego Suarez, Madagascar; <sup>2</sup>University of Antsiranana, Diego Suarez, Madagascar;

Paper Id: 235

**02:25 PM1:** [EnergyTuePM107]

**Modeling Method Based On Iterative UKFNN Pumping Oil Production Process**

L. Taifu <sup>1</sup>; **X. Liang** <sup>2</sup>; Z. Pan <sup>3</sup>; T. Haihong <sup>1</sup>; <sup>1</sup>chongqing university of science & technology, chongqing, China; <sup>2</sup>, ÖÖÇİ, China; <sup>3</sup>Xijian Shiyou University, xi'an, China;

Paper Id: 272

**02:50 PM1:** [EnergyTuePM108]

**Effect of Gas Injection on Reservoir Fluid Properties of a Fractured Oil Reservoir**

**M. Deghani** <sup>1</sup>; <sup>1</sup>National Iranian South Oil Company (NISOC) - National Iranian Oil Company (NIOC), Omidieh, Iran (Islamic Republic of Iran);

Paper Id: 387

**03:15 PM1:** [EnergyTuePM109]

**Naturally Fractured Reservoirs Characterization Using Well Test Analysis**

**A. Esmaeili** <sup>1</sup>; <sup>1</sup>National Iranian South Oil Company (NISOC) - National Iranian Oil Company (NIOC), Omidieh, Iran (Islamic Republic of Iran);

Paper Id: 380

**03:40 AM Break**

SESSION: **EnergyTuePM2**      **3rd Intl. Symp. on Sustainable Energy Production:  
Gas/Oil/Shale; Coal; Nuclear; Waste/Bioprocessing  
and renewables: wind/waves**

Tue Nov, 08 2016

Room: **HERB II**

Session Chairs: Maryam **Dehghani**; Abdollah **Esmaeili**; Student Monitor: TBA

**04:05 PM2:** [EnergyTuePM210]

**Determining Relative Permeability Correlation for an Oil Field**

**A. Esmaeili**<sup>1</sup>; <sup>1</sup>National Iranian South Oil Company (NISOC) - National Iranian Oil Company (NIOC), Omiodieh, Iran (Islamic Republic of Iran);

Paper Id: 371

**04:30 PM2:** [EnergyTuePM211]

**Predicting Fluid-Flow in Naturally Fractured Reservoirs**

**A. Esmaeili**<sup>1</sup>; <sup>1</sup>National Iranian South Oil Company (NISOC) - National Iranian Oil Company (NIOC), Omiodieh, Iran (Islamic Republic of Iran);

Paper Id: 372

**04:55 PM2:** [EnergyTuePM212]

**Optimization of Water Injection Well Placement for Water Injection into an Oil Reservoir to Enhance Oil Recovery**

**A. Esmaeili**<sup>1</sup>; <sup>1</sup>National Iranian South Oil Company (NISOC) - National Iranian Oil Company (NIOC), Omiodieh, Iran (Islamic Republic of Iran);

Paper Id: 373

**05:20 PM2:** [EnergyTuePM213]

**Optimization of Smart Water Injection in Sandstone Reservoirs using Different Injected Water Salinities for Enhance Oil Recovery**

**A. Esmaeili**<sup>1</sup>; <sup>1</sup>National Iranian South Oil Company (NISOC) - National Iranian Oil Company (NIOC), Omiodieh, Iran (Islamic Republic of Iran);

Paper Id: 374

**05:45 PM** Organized Activities

**08:30 AM - 10:30 PM** [SUMMIT PLENARY](#)

**10:30 AM** Break

SESSION: **BatteryTueAM.**      **3rd Intl. Symp. on Sustainable Secondary Battery  
Manufacturing and Recycling**

Tue Nov, 08 2016

Room: **OCEAN**

Session Chairs: Janna **Maranas**; PV **Aravind**; Student Monitor: TBA

**10:55 AM.:** [BatteryTueAM.02] Keynote

**The Novel Rechargeable Aluminium-Ion Batteries**

**S. Jiao**<sup>1</sup>; **S. Wang**<sup>1</sup>; **H. Lei**<sup>1</sup>; **J. Wang**<sup>1</sup>; <sup>1</sup>University of Science and Technology Beijing, Beijing, China;

Paper Id: 397

**11:20 AM.:** [BatteryTueAM.03] Keynote  
**High Performance Li-I2 Battery Based On Ultrafast Pseudo-Capacitance At Nitrogen Doped Carbon Interlayer**

**C. Lai**<sup>1</sup>; <sup>1</sup>Jiangsu Normal University, Xuzhou, China;  
Paper Id: 503

**11:45 AM.:** [BatteryTueAM.04]  
**Overview On Promising Energy Storage Devices With Chemistry Beyond Lithium Ion Batteries**

**C. Capiglia**<sup>1</sup>; <sup>1</sup>Recruit R&D, Tokyo, Japan;  
Paper Id: 288

**12:10 AM.:** [BatteryTueAM.05] Keynote  
**High Specific Energy Lithium-Sulfur Batteries Based On Advanced Materials**

**R. Chen**<sup>1</sup>; <sup>1</sup>Beijing Institute of Technology, Beijing, China;  
Paper Id: 504

**12:50 PM LUNCH**

SESSION:**BatteryTuePM1**      **3rd Intl. Symp. on Sustainable Secondary Battery Manufacturing and Recycling**

Tue Nov, 08 2016      Room: **OCEAN**

Session Chairs: Yusheng Ye; Student Monitor: TBA

**02:00 PM1:** [BatteryTuePM106]  
**A Clean Future by Electron: Critical Materials for Electrochemical Energy Systems**

**Y. Liu**<sup>1</sup>; **V. Kumar**<sup>1</sup>; <sup>1</sup>University of Cambridge, Cambridge, United Kingdom (Great Britain);  
Paper Id: 486

**02:25 PM1:** [BatteryTuePM107]  
**Batteries Located In A New Energy Paradigm**

**V. Kumar**<sup>1</sup>; <sup>1</sup>University of Cambridge, Cambridge, United Kingdom (Great Britain);  
Paper Id: 364

**02:50 PM1:** [BatteryTuePM108]  
**Graphene Based Electrode Materials for Energy Storage Applications**

**H. Kim**<sup>1</sup>; <sup>1</sup>University of Cambridge, Cambridge, United Kingdom (Great Britain);  
Paper Id: 393

**03:15 PM1:** [BatteryTuePM109]  
**Rational Design of Electrode Scaffolds and Diffusion Barriers for Lithium-Sulfur Batteries**

**K. Xi**<sup>1</sup>; **V. Kumar**<sup>1</sup>; **T. Zhao**<sup>1</sup>; <sup>1</sup>University of Cambridge, Cambridge, United Kingdom

(Great Britain);  
Paper Id: 488

**03:40 AM Break**

Yoon

SESSION: <b>MultifunctionalMaterialsTuePM2</b>	<b>2nd Intl. Symp. on Multifunctional and Smart Materials, Systems and Structures for Sustainability (MSMSSS)</b>
Tue Nov, 08 2016	Room: <b>OCEAN</b>
<u>Session Chairs:</u> Lidia <b>Benea</b> ; Serguei <b>Savilov</b> ; <u>Student Monitor:</u> TBA	

**04:05 PM2:** [MultifunctionalMaterialsTuePM210]

**Challenges and Results of Nanocomposite and Hybrid Films obtained by Electrodeposition**

L. **Benea**<sup>1</sup>; <sup>1</sup>Dunarea de Jos University of Galati, Galati, Romania;

Paper Id: 239

**04:30 PM2:** [MultifunctionalMaterialsTuePM211]

**Studies of Solid-state Electrolytes for High Energy Storage Devices**

L. **Lu**<sup>1</sup>; Y. **Zhu**<sup>1</sup>; M. **Kotobuki**<sup>1</sup>; Y. **Zhang**<sup>1</sup>; <sup>1</sup>National University of Singapore, Singapore, Singapore;

Paper Id: 245

**04:55 PM2:** [MultifunctionalMaterialsTuePM212]

**Modern Challenges for Structures Carbon Nanomaterials Characterization**

S. **Savilov**<sup>1</sup>; <sup>1</sup>Moscow State University, Moscow, Russian Federation;

Paper Id: 338

**08:30 AM - 10:30 PM** [\*\*SUMMIT PLENARY\*\*](#)

**10:30 AM Break**

SESSION: <b>IronTueAM.</b>	<b>D'Abreu International Symposium (4th Intl. Symp. on Advanced Sustainable Iron and Steel Making)</b>
Tue Nov, 08 2016	Room: <b>GINKO</b>
<u>Session Chairs:</u> Jose Adilson <b>de Castro</b> ; Andrey <b>Dmitriev</b> ; <u>Student Monitor:</u> TBA	

**10:55 AM.:** [IronTueAM.02] Plenary

**Brazil - National R & D Objectives And Challenges For The Mining Sector**

F. **Lins**<sup>1</sup>; <sup>1</sup>CETEM, Sao Polo, Brazil;

Paper Id: 467

**11:20 AM.:** [IronTueAM.03] Plenary

**Mathematical Analysis on Charcoal Charging/Injection Operations of Ironmaking Blast Furnace**

**J. Yagi**<sup>1</sup>; J. De Castro<sup>2</sup>; H. Nogami<sup>1</sup>; T. Akiyama<sup>3</sup>; E. Kasai<sup>4</sup>; <sup>1</sup>Tohoku University, Sendai, Japan; <sup>2</sup>UFF - Federal Fluminense University, Volta Redonda, Brazil; <sup>3</sup>Hokkaido University, Sapporo, Japan; <sup>4</sup>Graduate School of Environmental Studies, Tohoku University, Sendai, Japan;  
Paper Id: 68

**11:45 AM.:** [IronTueAM.04]

**Current Challenges On Iron Ore Beneficiation: Reaching The Right Quality For Difficult Ores In Difficult Times**

**A. Araujo**<sup>1</sup>; <sup>1</sup>ArcelorMittal, Maizieres-les-Metz, France;  
Paper Id: 292

**12:10 AM.:** [IronTueAM.05] Plenary

**Iron Carburization Rate by Carbon in Slags through Carbon/Slag and Slag/Metal Reactions**

H. Ono<sup>1</sup>; K. Tanizawa<sup>2</sup>; **T. Usui**<sup>3</sup>; <sup>1</sup>Osaka University, Suita, Japan; <sup>2</sup>NIPPON STEEL & SUMITOMO METAL CORPORATION, Tokai, Japan; <sup>3</sup>Osaka University, Ibaraki, Japan;  
Paper Id: 172

**12:50 PM LUNCH**

SESSION:IronTuePM1

**D'Abreu International Symposium (4th Intl. Symp. on Advanced Sustainable Iron and Steel Making)**

Tue Nov, 08 2016

Room: **GINKO**

Session Chairs: Eduardo **Brocchi**; Mery-Cecilia **Gomez-Marroquin**; Student Monitor: TBA

**02:00 PM1:** [IronTuePM106]

**Comparative Study Of Reduction Zinc Ferrite And EAF Dust By CO-CO2 Gas Mixture**

**M. Gomez Marroquin**<sup>1</sup>; J. D Abreu<sup>2</sup>; <sup>1</sup>Universidad Nacional de Ingenieria-UNI, Lima, Peru; <sup>2</sup>PUC-Rio, Rio de Janeiro, Brazil;  
Paper Id: 363

**02:25 PM1:** [IronTuePM107]

**Experimental Study on the Dephosphorization Capacity of Heterogeneous Fluxes**

**X. Bi**<sup>1</sup>; <sup>1</sup>Wuhan University of Science and Technology, Wuhan, China;  
Paper Id: 46

**02:50 PM1:** [IronTuePM108]

**Effect of the characteristics of inclusions in Al-Ti complex deoxidized and Ca treated pipeline steel on the corrosion behavior in the chloride ion medium**

**W. Zheng**<sup>1</sup>; <sup>1</sup>Wuhan University of Science and Technology, WUHAN, China;  
Paper Id: 190

**03:15 PM1:** [IronTuePM109]

[*Oxygen applications for sustainable steelmaking/steel melting*] **Optimization Of Roller Velocity For Quenching Machine Based On Mathematical Model Of Thermal Process**

**J. Zhang**<sup>1</sup>; <sup>1</sup>, Qingdao, China;

Paper Id: 57

**03:40 AM** Break

SESSION:IronTuePM2 **D'Abreu International Symposium (4th Intl. Symp. on Advanced Sustainable Iron and Steel Making)**

Tue Nov, 08 2016 Room: **GINKO**

Session Chairs: Eduardo **Brocchi**; Mery-Cecilia **Gomez-Marroquin**; Student Monitor: TBA

**04:05 PM2:** [IronTuePM210]

[*Oxygen applications for sustainable steelmaking/steel melting*] **Minimum Carbon Consumption Diagram. Application to the Blast Furnace Ironmaking Process.**

**E. Dionisio Calderon**<sup>1</sup>; **J. D Abreu**<sup>1</sup>; <sup>1</sup>PUC-Rio, Rio de Janeiro, Brazil;

Paper Id: 91

**04:30 PM2:** [IronTuePM211]

[*Oxygen applications for sustainable steelmaking/steel melting*] **Simultaneous Metallization and Carburization in Shaft Furnaces. From Experimentals to Modelling**

**E. Falero**<sup>1</sup>; **J. D Abreu**<sup>1</sup>; <sup>1</sup>PUC-Rio, Rio de Janeiro, Brazil;

Paper Id: 99

**04:55 PM2:** [IronTuePM212]

[*Oxygen applications for sustainable steelmaking/steel melting*] **Basic Principles And Features Of Self-Organizing Jet-Emulsion Metallurgical Process (Ser)**

**V. Tsymbal**<sup>1</sup>; **A. Olennikov**<sup>1</sup>; **F. Kongoli**<sup>2</sup>; **I. Rybenko**<sup>1</sup>; **V. Kozhemyachenko**<sup>1</sup>; **E. Protopopov**<sup>1</sup>; <sup>1</sup>Siberian State Industrial University, Novokuznetsk, Russian Federation; <sup>2</sup>Flogen Technologies Inc., Mont-Royal, Canada;

Paper Id: 126

**05:20 PM2:** [IronTuePM213]

**Influence Of Ferrous Raw Materials In The TKCSA Blast Furnaces Operation**

**G. Silva**<sup>1</sup>; **A. Hirano**<sup>2</sup>; **B. Pinheiro Da Silva**<sup>3</sup>; <sup>1</sup>Thyssenkrupp CSA, Rio de Janeiro, Brazil; <sup>2</sup>ThyssenKrupp, Rio de Janeiro, Brazil; <sup>3</sup>ThyssenKrupp CSA, Rio de Janeiro, Brazil;

Paper Id: 144

**05:45 PM** Organized Activities

**08:30 AM - 10:30 PM** [SUMMIT PLENARY](#)

**10:30 AM** Break

SESSION: <b>MetalsTueAM.</b>	<b>Yagi International Symposium (2nd Intl. Symp. on Sustainable Metals &amp; Alloys Processing)</b>
Tue Nov, 08 2016	Room: <b>Salon III/IV</b>
<u>Session Chairs:</u> Hadi <b>Purwanto</b> ; <u>Student Monitor:</u> TBA	

**10:55 AM.:** [MetalsTueAM.02] Plenary

**Effective Use Of Waste Heat In Steelworks**

**A. Fujibayashi**<sup>1</sup> ; <sup>1</sup>JFE Steel Corp., Kawasaki, Japan;

Paper Id: 116

**11:20 AM.:** [MetalsTueAM.03] Plenary

**Recent Development of Combustion Synthesis**

J. Yagi<sup>1</sup> ; T. Akiyama<sup>2</sup> ; **X. Yi**<sup>3</sup> ; <sup>1</sup>Tohoku University, Sendai, Japan; <sup>2</sup>Hokkaido University, Sapporo, Japan; <sup>3</sup>, Yangling, China;

Paper Id: 117

**11:45 AM.:** [MetalsTueAM.04]

**Waste Heat Recovery using Thermoelectric Generator in a Continuous Casting Process**

**N. Ogawa**<sup>1</sup> ; T. Kuroki<sup>1</sup> ; K. Tsutsumi<sup>1</sup> ; T. Kajihara<sup>2</sup> ; H. Hachiuma<sup>2</sup> ; I. Sumi<sup>1</sup> ; <sup>1</sup>JFE Steel Corporation, Kawasaki, Japan; <sup>2</sup>KELK Ltd., Hiratsuka, Japan;

Paper Id: 83

**12:10 AM.:** [MetalsTueAM.05]

**Combustion Synthesis of alpha-Si<sub>3</sub>N<sub>4</sub> Assisted by Salt Additives**

**X. Yi**<sup>1</sup> ; S. Suzuki<sup>2</sup> ; J. Niu<sup>3</sup> ; T. Akiyama<sup>3</sup> ; <sup>1</sup>, Yangling, China; <sup>2</sup>Hokkaido university, sapporo, Japan; <sup>3</sup>Hokkaido University, Sapporo, Japan;

Paper Id: 168

**12:50 PM** LUNCH

SESSION: <b>MetalsTuePM1</b>	<b>Yagi International Symposium (2nd Intl. Symp. on Sustainable Metals &amp; Alloys Processing)</b>
Tue Nov, 08 2016	Room: <b>Salon III/IV</b>
<u>Session Chairs:</u> Akio <b>Fujibayashi</b> ; <u>Student Monitor:</u> TBA	

**02:00 PM1:** [MetalsTuePM106] Invited

**A Research Experience on Science and Technology of Ironmaking**

**J. Yagi**<sup>1</sup> ; T. Akiyama<sup>2</sup> ; E. Kasai<sup>3</sup> ; H. Nogami<sup>1</sup> ; <sup>1</sup>Tohoku University, Sendai,

Japan; <sup>2</sup>Hokkaido University, Sapporo, Japan; <sup>3</sup>Graduate School of Environmental



Studies, Tohoku University, Sendai, Japan;  
Paper Id: 22

**02:25 PM1:** [MetalsTuePM107] Invited

**Shaping Future By Learning History Of Iron Making Technology In Japan**

**Y. Matsui**<sup>1</sup>; <sup>1</sup>KOBELCO RESEARCH INSTITUTE, INC., Kobe, Japan;

Paper Id: 15

**02:50 PM1:** [MetalsTuePM108]

**Education Programs and Activities in China for the Sustainability of Metallurgical Industry**

**G. Li**<sup>1</sup>; **C. Zhu**<sup>2</sup>; **J. Zhang**<sup>3</sup>; **X. Liang**<sup>2</sup>; <sup>1</sup>Wuhan University of Science and Technology, Wuhan, China; <sup>2</sup>Key Laboratory for Ferrous Metallurgy and Resources Utilization of Ministry of Education, Wuhan University of Science and Technology, Wuhan, China; <sup>3</sup>School of Information Science and Engineering, Wuhan University of Science and Technology, Wuhan, China;

Paper Id: 1

**03:15 PM1:** [MetalsTuePM109] Invited

**Enhancement Of Methanol Production With In-Situ Water Removal In A Fixed-Bed Membrane Reactor**

**J. Chen**<sup>1</sup>; **Q. Sun**<sup>2</sup>; <sup>1</sup>Huzhou, China; <sup>2</sup>Zhejiang University, Hangzhou, China;

Paper Id: 51

**03:40 AM** Break

SESSION:**MetalsTuePM2**

**Yagi International Symposium (2nd Intl. Symp. on Sustainable Metals & Alloys Processing)**

Tue Nov, 08 2016

Room: **Salon III/IV**

Session Chairs: **Xuegong BI**; Student Monitor: TBA

**04:05 PM2:** [MetalsTuePM210] Plenary

**Self-Reduction Process For Ferroalloys**

**C. Takano**<sup>1</sup>; **A. Zambrano**<sup>2</sup>; **R. Braga**<sup>1</sup>; **M. Breda Mourao**<sup>1</sup>; **C. Narita**<sup>3</sup>; **J. De Castro**<sup>4</sup>; <sup>1</sup>University of Sao Paulo, Sao Paulo, Brazil; <sup>2</sup>Pontificia Universidad Catolica del Peru, Lima, Peru; <sup>3</sup>Polytechnic School of the University of Sao Paulo, Sao Paulo, Brazil; <sup>4</sup>UFF - Federal Fluminense University, Volta Redonda, Brazil;

Paper Id: 332

**04:30 PM2:** [MetalsTuePM211] Keynote

**Progress in Gaseous Reduction Models for Iron Ore Agglomerates**

**T. Usui**<sup>1</sup>; **M. Naito**<sup>2</sup>; **H. Kamiya**<sup>3</sup>; **H. Kawabata**<sup>4</sup>; **H. Ono**<sup>4</sup>; **Y. Nakamuro**<sup>5</sup>; **M. Nishi**<sup>6</sup>; **P. Assis**<sup>7</sup>; <sup>1</sup>Osaka University, Ibaraki, Japan; <sup>2</sup>Nippon Steel & Sumikin Technology Co., Ltd., Futtsu, Japan; <sup>3</sup>Honda Motor Co., Ltd., Tokyo, Japan; <sup>4</sup>Osaka University, Suita, Japan; <sup>5</sup>Naniwa Pump Mfg. Co., Ltd., Osaka, Japan; <sup>6</sup>Izumi Industry, Inc., Hakuigun, Japan; <sup>7</sup>UFOP (Federal University of Ouro Preto) / REDEMAT, Ouro Preto, Brazil;

Paper Id: 155

**04:55 PM2:** [MetalsTuePM212]

**Multistep Reduction Kinetics Of Hematite (Fe<sub>2</sub>O<sub>3</sub>) To Iron In A Micro Fluidized Bed Reactor By Hydrogen At Low Temperatures**

**H. Chen**<sup>1</sup>; **Z. Zheng**<sup>1</sup>; **Z. Chen**<sup>2</sup>; **X. He**<sup>1</sup>; **K. He**<sup>3</sup>; <sup>1</sup>Chongqing University, Chongqing, China; <sup>2</sup>University of British Columbia, Vancouver, Canada; <sup>3</sup>, Chongqing, China;

Paper Id: 50

**05:20 PM2:** [MetalsTuePM213]

**Oxidation Process of High-chromium Vanadium-Cbearing Titanomagnetite**

**M. Chu**<sup>1</sup>; **J. Tang**<sup>1</sup>; **C. Feng**<sup>2</sup>; **F. Li**<sup>1</sup>; **Y. Tang**<sup>1</sup>; **Z. Liu**<sup>1</sup>; <sup>1</sup>Northeastern University, Shenyang, China; <sup>2</sup>, Shenyang, China;

Paper Id: 21

**05:45 PM** Organized Activities

**08:30 AM - 10:30 PM** [SUMMIT PLENARY](#)

**10:30 AM** Break

SESSION:**MetallicTueAM.**

**Dubois International Symposium (Intl Sympo. on Sustainable Complex Metallic Systems)**

Tue Nov, 08 2016

Room: **PALM**

Session Chairs: Bostjan **Markoli**; Student Monitor: TBA

**10:55 AM.:** [MetallicTueAM.02] Plenary

**Rare Earth Metals and Magnetostriction**

**M. Coey**<sup>1</sup>; **Y. He**<sup>2</sup>; **C. Jiang**<sup>2</sup>; <sup>1</sup>School of Physics, Dublin, Ireland; <sup>2</sup>School of Materials Science and Engineering, Beijing, China;

Paper Id: 140

**11:20 AM.:** [MetallicTueAM.03] Keynote

**Revealing The Magnetization Distribution And Its Reversal In Electroplated Fe-Pd and Co-Pt Nanowire(S) By Using In-Field Magnetic Force Microscopy**

**K. Zuzek Rozman**<sup>1</sup>; **D. Pecko**<sup>2</sup>; **M. Arshad**<sup>3</sup>; **S. Sturm**<sup>2</sup>; **S. Kobe**<sup>4</sup>; **M. P Proenca**<sup>5</sup>; **M. Vazquez**<sup>5</sup>; <sup>1</sup>Jozef Stefan Institute, Ljubljana, Slovenia; <sup>2</sup>Jozef Stean Institute, Ljubljana, Slovenia; <sup>3</sup>Jozef Stefan Institute, Ljubljana, Slovenia; <sup>4</sup>Josef Stefan Institute, Ljubljana, Slovenia; <sup>5</sup>Instituto de Ciencia de Materiales de Madrid, Madrid, Spain;

Paper Id: 132

**11:45 AM.:** [MetallicTueAM.04] Invited

**Tailoring the Microstructure to Achieve Maximum Coercivity: HRTEM Investigations**

**S. Kobe**<sup>1</sup>; **M. Soderznic**<sup>2</sup>; **K. Zagar**<sup>2</sup>; **S. Sturm**<sup>3</sup>; <sup>1</sup>Josef Stefan Institute, Ljubljana, Slovenia; <sup>2</sup>Jozef Stefan Institute, Ljubljana, Slovenia; <sup>3</sup>Jozef Stean Institute, Ljubljana, Slovenia;

Paper Id: 154

12:10 AM.: [MetallicTueAM.05]

**Boiler Tube Failure Due to Flow Accelerated Corrosion in Kazeroon Power plant**

**S. Mohajeri**<sup>1</sup>; <sup>1</sup>Mapna, Tehran, Iran (Islamic Republic of Iran);

Paper Id: 457

12:50 PM LUNCH

SESSION: **MetallicTuePM1**

**Dubois International Symposium (Intl. Symp. on Sustainable Complex Metallic Systems)**

Tue Nov, 08 2016

Room: **PALM**

Session Chairs: Jürgen **Eckert**; Student Monitor: TBA

02:00 PM1: [MetallicTuePM106] Keynote

**Ti-based Metallic Glasses And Related Composites: Phase Formation and Thermal Stability**

**M. Calin**<sup>1</sup>; **S. Bera**<sup>2</sup>; **J. Eckert**<sup>3</sup>; <sup>1</sup>Leibniz-Institute for Solid State and Materials Research Dresden (IFW Dresden), Dresden, Germany (Deutschland); <sup>2</sup>IFW Dresden, Dresden, Germany (Deutschland); <sup>3</sup>Erich Schmid institute of Materials Science, Leoben, Austria;

Paper Id: 166

02:25 PM1: [MetallicTuePM107] Invited

**Influence Of Alloy Addition And Fabrication Techniques On The Formation Of Quasicrystals In Several Al-Based Systems**

**W. Wolf**<sup>1</sup>; **B. Ogama Sitta**<sup>2</sup>; **L. M. Martini**<sup>2</sup>; **A. Moreira Jorge Jr.**<sup>2</sup>; **C. Bolfarini**<sup>2</sup>; **C. Shyinti Kiminami**<sup>2</sup>; **W. Jose Botta**<sup>2</sup>; <sup>1</sup>UFSCar (Federal University of São Carlos) - DEMA (Departamento de Engenharia de Materiais), São Carlos, Brazil; <sup>2</sup>UFSCar (Federal University of Sao Carlos), Sao Carlos, Brazil;

Paper Id: 261

02:50 PM1: [MetallicTuePM108] Invited

**Fe-based Bulk Metallic Glasses with Novel Mechanical Properties**

**B. Shen**<sup>1</sup>; <sup>1</sup>Southeast University, Nanjing, China;

Paper Id: 424

03:15 PM1: [MetallicTuePM109]

**Principal Cluster Definition And Composition Interpretation Of Binary Bulk Metallic Glasses**

**D. Dong**<sup>1</sup>; **Y. Ma**<sup>2</sup>; **C. Dong**<sup>1</sup>; <sup>1</sup>Dalian University of Technology, Dalian, China; <sup>2</sup>Hainan University, Haikou, China;

Paper Id: 197

03:40 AM Break

SESSION: **MetallicTuePM2** **Dubois International Symposium (Intl. Sympo. on Sustainable Complex Metallic Systems)**

Tue Nov, 08 2016

Room: **PALM**

Session Chairs: Mariana **Calin**; Student Monitor: TBA

**04:05 PM2:** [MetallicTuePM210] Keynote

**15 Years SPD-Processed Bulk Nanostructured Materials: From Mechanical to Functional Highlights**

**M. Zehetbauer**<sup>1</sup>; <sup>1</sup>University of Vienna, Faculty of Physics, Vienna, Austria;

Paper Id: 212

**04:30 PM2:** [MetallicTuePM211] Invited

**Dental Ceramic Materials: State Of The Art And Beyond**

**S. Perko**<sup>1</sup>; A. Kocjan<sup>2</sup>; N. Drnovsek<sup>3</sup>; <sup>1</sup>Ustna Medicina d.o.o., Ljubljana, Slovenia; <sup>2</sup>Jožef Stefan Institute, Ljubljana, Slovenia; <sup>3</sup>Josef Stefan Institute - Department for nanostructured materials, Ljubljana, Slovenia;

Paper Id: 323

**04:55 PM2:** [MetallicTuePM212]

**Dilatation Elasticity Applied For The Modelling Of Soft Biological Tissue: A Numerical Investigation**

R. Kouitat Njiwa<sup>1</sup>; **A. Voignier**<sup>2</sup>; J. Jehl<sup>2</sup>; P. Maureira<sup>3</sup>; <sup>1</sup>Institut Jean Lamour (UMR 7198 CNRS-Universite de lorraine), Nancy, France; <sup>2</sup>Institut Jean Lamour, Nancy, France; <sup>3</sup>INSERM U961, Nancy, France;

Paper Id: 395

**05:20 PM2:** [MetallicTuePM213]

**Micropolar Elasticity Applied For The Modelling Of Jaw Bone Tissue: A Numerical Investigation**

**G. Pierson**<sup>1</sup>; P. Bravetti<sup>2</sup>; R. Kouitat Njiwa<sup>2</sup>; <sup>1</sup>Institut Jean Lamour, Nancy, France; <sup>2</sup>Institut Jean Lamour (UMR 7198 CNRS-Universite de lorraine), Nancy, France;

Paper Id: 396

**05:45 PM** Organized Activities

**08:30 AM - 10:30 PM** [SUMMIT PLENARY](#)

**10:30 AM** Break

**Øye International Symposium (Intl. Symp. on**

**SESSION:AluminumTueAM. Sustainable Ionic Liquid and Aluminum Extraction and Processing)**

Tue Nov, 08 2016

Room: **HERB 1**

Session Chairs: Ana-Maria Julieta **Popescu**; Student Monitor: TBA

**10:55 AM.:** [AluminumTueAM.02]

**Engineering Development And Application Prospect Of Alumina Extraction Technologies From High-Alumina Fly Ash**

**G. Li**<sup>1</sup>; X. Pan<sup>1</sup>; <sup>1</sup>, Shenyang, China;

Paper Id: 102

**11:20 AM.:** [AluminumTueAM.03]

**Current Efficiency Of Ultrasound-Aided Aluminum Electrolysis In Laboratory Cell**

**J. Xue**<sup>1</sup>; <sup>1</sup>University of Science and Technology Beijing, Beijing, China;

Paper Id: 361

**11:45 AM.:** [AluminumTueAM.04]

**Vacuum Distillation Process: A Sustainable Solution for the Recycling of Spent Pot Lining**

**N. Feng**<sup>1</sup>; <sup>1</sup>, Shenyang, China;

Paper Id: 118

**12:10 AM.:** [AluminumTueAM.05]

**Control Of Dispersoids In 7475 Aluminum Alloy**

Y. Zhou<sup>1</sup>; L. Kang<sup>2</sup>; G. Zhao<sup>3</sup>; **N. Tian**<sup>2</sup>; <sup>1</sup>, shenyang, China; <sup>2</sup>Northeastern University, Shenyang, China; <sup>3</sup>, Shenyang, China;

Paper Id: 297

**12:50 PM LUNCH**

**Øye International Symposium (Intl. Symp. on**

**SESSION:AluminumTuePM1 Sustainable Ionic Liquid and Aluminum Extraction and Processing)**

Tue Nov, 08 2016

Room: **HERB 1**

Session Chairs: Catherine **Bessada**; Student Monitor: TBA

**02:00 PM1:** [AluminumTuePM106]

**The Effect Of Additives On The Electrodeposition Of Aluminium From Chloroaluminium Ionic Liquids**

**Q. Wang**<sup>1</sup>; X. Lu<sup>1</sup>; S. Zhang<sup>1</sup>; <sup>1</sup>Institute of Process Engineering, Chinese Academy of Sciences, Beijing, China;

Paper Id: 66

**02:25 PM1:** [AluminumTuePM107]

**Preparation Of Aluminum And Magnesium Foams By Liquid Processing Route**

**L. Hongjie**<sup>1</sup>; <sup>1</sup>Northeastern University, Shenyang, China;

Paper Id: 71

**02:50 PM1:** [AluminumTuePM108]

**The Application Of Deep Eutectic Solvents Ionic Liquids For Environmentally-Friendly Dissolution And Recovery Of Metals From Electronic Waste**

**A. Popescu**<sup>1</sup>; C. Donath<sup>1</sup>; E. Neacsu<sup>2</sup>; V. Soare<sup>3</sup>; M. Burada<sup>4</sup>; V. Constantin<sup>2</sup>; M. Gaune Escard<sup>5</sup>; <sup>1</sup>Ilie Murgulescu Institute of Physical Chemistry, Laboratory of Molten Salts, Bucharest, Romania; <sup>2</sup>Ilie Murgulescu Institute of Physical Chemistry, Bucharest, Romania; <sup>3</sup>National R&D Institute for Nonferrous and Rare Metals - IMNR, Pantelimon, Romania; <sup>4</sup>National R&D Institute for Nonferrous and Rare Metals – IMNR, Pantelimon, Romania; <sup>5</sup>AIX-MARSEILLE UNIVERSITE/POLYTECH, CNRS/IUSTI UMR7343, Marseille, France;

Paper Id: 133

**03:15 PM1:** [AluminumTuePM109]

**Research On The Phase Transformation In Calcification - Carbonation Method For Low-Grade Bauxite Utilization**

**L. Guozhi**<sup>1</sup>; T. Zhang<sup>1</sup>; C. Zheng<sup>2</sup>; Z. Xiaofeng<sup>1</sup>; W. Zhang<sup>3</sup>; Y. Wang<sup>3</sup>; L. Xie<sup>2</sup>; <sup>1</sup>Northeastern University, China, Shenyang, China; <sup>2</sup>Northeastern University, shenyang, China; <sup>3</sup>Northeastern University, Shenyang, China;

Paper Id: 95

**03:40 AM Break**

<b>Øye International Symposium (Intl. Symp. on Sustainable Ionic Liquid and Aluminum Extraction and Processing)</b>	
<b>SESSION: AluminumTuePM2</b>	
Tue Nov, 08 2016	Room: <b>HERB 1</b>
Session Chairs: Naixiang <b>Feng</b> ; Student Monitor: TBA	

**04:05 PM2:** [AluminumTuePM210]

**Structure And Properties Of Scandia Solutions In Cryolite Melts**

Y. Zaikov<sup>1</sup>; A. Redkin<sup>2</sup>; **O. Tkacheva**<sup>3</sup>; A. Dedyukhin<sup>4</sup>; A. Rudenko<sup>4</sup>; <sup>1</sup>Institute of High Temperature Electrochemistry of the Ural branch of the Russian Academy of Sciences, Ekaterinburg, Russian Federation; <sup>2</sup>Institute of high temperature electrochemistry of the Ural branch of the Russian academy of sciences, Ekaterinburg, Russian Federation; <sup>3</sup>IHTE, Ekaterinburg, Russian Federation; <sup>4</sup>Institute of high temperature electrochemistry, Yekaterinburg, Russian Federation;

Paper Id: 344

**04:30 PM2:** [AluminumTuePM211]

**Impact of Process Parameters on Energy Consumption in Aluminum Electrolytic Production**

**S. Qiu**<sup>1</sup>; <sup>1</sup>Zhengzhou Research Institute of CHALCO, Zhenzhou, China;  
Paper Id: 208

**08:30 AM - 10:30 PM SUMMIT PLENARY**

**10:30 AM** Break

SESSION:**MathematicsTueAM. Santilli International Symposium (Intl. Symp. on Sustainable Mathematics Applications)**

Tue Nov, 08 2016

Room: **Salon II**

Session Chairs: Ruggero **Santilli**; Student Monitor: TBA

**10:55 AM.:** [MathematicsTueAM.02] Plenary

**Physics in the Large Hadron Collider era and beyond**

**J. Rak**<sup>1</sup>; <sup>1</sup>, Jyväskylä, Finland;

Paper Id: 472

**11:20 AM.:** [MathematicsTueAM.03]

**Santilli Synthesis of the Neutron According to Hadronic Mechanics**

**C. Burande**<sup>1</sup>; <sup>1</sup>J D College of Engineering & Management, Nagpur, Nagpur, India;

Paper Id: 469

**11:45 AM.:** [MathematicsTueAM.04]

**Confirmation of Intermediate Controlled Nuclear Syntheses (ICNS) without Harmful Radiations**

**R. Lanjewar**<sup>1</sup>; <sup>1</sup>Department of Chemistry, Dharampeth M.P.Deo Memorial Science College, Nagpur, Nagpur, India;

Paper Id: 309

SESSION:**MathematicsTuePM1**

**Santilli International Symposium (Intl. Symp. on Sustainable Mathematics Applications)**

Tue Nov, 08 2016

Room: **Salon II**

Session Chairs: Svetlin **Georgiev**; Student Monitor: TBA

**02:00 PM1:** [MathematicsTuePM106]

**Exact And Invariant Representation Of Nuclear Magnetic Momen Ts According To Isomathematics And Isomechanics**

**P. Santilli**<sup>1</sup>; <sup>1</sup>Thunder Energies Corporation, Tarpon Springs, United States;

Paper Id: 427

**02:25 PM1:** [MathematicsTuePM107]

**Nuclear Configuration of Stable Nuclides In Terms Of Isonucleons and Their Nuclear Spins**

**A. Bhalekar**<sup>1</sup>; **P. Santilli**<sup>2</sup>; <sup>1</sup>R. T. M. Nagpur University,, Nagpur, India; <sup>2</sup>Thunder Energies Corporation, Tarpon Springs, United States;

Paper Id: 251

**02:50 PM1:** [MathematicsTuePM108]

**Study of Bose-Einstein Correlation Within the Framework of Hadronic Mechanics**

**C. Burande**<sup>1</sup>; <sup>1</sup>J D College of Engineering & Management, Nagpur, Nagpur, India;

Paper Id: 470

SESSION: **MathematicsTuePM2**

**Santilli International Symposium (Intl. Symp.  
on Sustainable Mathematics Applications)**

Tue Nov, 08 2016

Room: **Salon II**

Session Chairs: Jan **Rak**; Student Monitor: TBA

**04:05 PM2:** [MathematicsTuePM210]

**From Newtonian Mechanics to Hadronic Mechanics : The Road Ahead**

**B. Tuladhar**<sup>1</sup>; <sup>1</sup>Kathmandu University, Kavre, Nepal;

Paper Id: 423

**04:30 PM2:** [MathematicsTuePM211]

**On The Nuclear Stability/Instability Using Closed Packing Of Isonucleons  
Envisaged In Santilli's Models Of Isonuclides**

**A. Bhalekar**<sup>1</sup>; R. Santilli<sup>2</sup>; <sup>1</sup>R. T. M. Nagpur University,, Nagpur, India; <sup>2</sup>CEO and  
Chief Scientist of Thunder Energies Corporation, Palm Harbor, United States;

Paper Id: 463

**04:55 PM2:** [MathematicsTuePM212]

**The New Sciences and Technologies for the Purification of Urban Air**

**S. Beghella Bartoli**<sup>1</sup>; R. Santilli<sup>2</sup>; <sup>1</sup>Thunder Energies Corporation, Montelupone,  
Italy; <sup>2</sup>CEO and Chief Scientist of Thunder Energies Corporation, Palm Harbor, United  
States;

Paper Id: 281

**05:20 PM2:** [MathematicsTuePM213]

**The Tyranny of the Lorentz group**

**Z. Oziewicz**<sup>1</sup>; H. Colin Garcia<sup>2</sup>; <sup>1</sup>Universidad Nacional Autonoma de Mexico,

Facultad de Estudios Superiores, Cuautitlan Izcalli, Mexico; <sup>2</sup>Universidad Nacional  
Autonoma de Mexico, Facultad de Estudios Superiores Cuautitlan, Cuautitlan Izcalli,

Mexico;

Paper Id: 230

**05:45 PM** Organized Activities



08:30 AM - 10:30 PM **SUMMIT PLENARY**

10:30 AM Break

**Yang International Symposium (3rd Intl. Symp. on  
SESSION:MultiscaleTueAM. Multiscale Material Mechanics and Multiphysics  
and Sustainable Applications)**

Tue Nov, 08 2016

Room: **Salon IV**

Session Chairs: Sulin **Zhang**; Student Monitor: Qi Nan **Li**;

**10:55 AM.:** [MultiscaleTueAM.02]

**Mechanics And Chemistry Of Hydrogels**

**Z. Suo**<sup>1</sup>; <sup>1</sup>Harvard University, Cambridge, United States;

Paper Id: 448

**11:20 AM.:** [MultiscaleTueAM.03]

[*Multiscale Computational Mechanics*] **Mechanical-Electric-Magnetic Coupling And  
Energy Conversion In Two-Dimensional Materials**

**W. Guo**<sup>1</sup>; <sup>1</sup>, Nanjing, China;

Paper Id: 449

**11:45 AM.:** [MultiscaleTueAM.04]

[*Gradient Elasticity*] **A Buckling-based Method for Measuring the Strain-Photonic  
Coupling Effect of GaAs Nanoribbons**

**X. Feng**<sup>1</sup>; <sup>1</sup>Tsinghua University, Beijing, China;

Paper Id: 512

**12:10 AM.:** [MultiscaleTueAM.05] Plenary

**Continuum Mechanics of the Past and Material Mechanics of the Future: The  
Role of China and Wei Yang**

**E. Aifantis**<sup>1</sup>; <sup>1</sup>Aristotle University of Thessaloniki, Thessaloniki, Greece;

Paper Id: 490

**12:50 PM LUNCH**

**Yang International Symposium (3rd Intl. Symp. on  
SESSION:MultiscaleTuePM1 Multiscale Material Mechanics and Multiphysics  
and Sustainable Applications)**

Tue Nov, 08 2016

Room: **Salon IV**

Session Chairs: Teng **Li**; Student Monitor: Kun **He**;

**02:00 PM1:** [MultiscaleTuePM106] Plenary

[*Multiscale Computational Mechanics*] **Pseudo-First-Order Phase Transition for  
Ultrahigh Positive/Negative Electrocaloric Effects in Perovskite Ferroelectrics**

**T. Zhang**<sup>1</sup>; <sup>1</sup>Shanghai University, Shanghai, China;

Paper Id: 351

**02:25 PM1:** [MultiscaleTuePM107]

[*Experimental Nanomechanics*] **In-Situ Transmission Electron Microscopy Studies of the Electrochemical Processes of Lithium Ion Battery Materials**

**J. Huang**<sup>1</sup>; J. Li<sup>2</sup>; T. Zhu<sup>3</sup>; S. Mao<sup>4</sup>; S. Zhang<sup>5</sup>; <sup>1</sup>Qinhuangdao, Qinhuangdao, China; <sup>2</sup>Massachusetts Institute of Technology, Cambridge, United States; <sup>3</sup>Georgia Institute of Technology, Atlanta, United States; <sup>4</sup>University of Pittsburgh, Pittsburgh, United States; <sup>5</sup>Pennsylvania State University, University Park, United States;  
Paper Id: 305

**02:50 PM1:** [MultiscaleTuePM108] Keynote

[*Defects on solids*] **Dilatation In Flow And Fracture Of Metallic Glasses**

**L. Dai**<sup>1</sup>; <sup>1</sup>Institute of Mechanics, Chinese Academy of Sciences, Beijing, China;  
Paper Id: 419

**03:15 PM1:** [MultiscaleTuePM109]

[*Defects on solids*] **The Stress-Velocity Relationship Of Dislocations And Their Speed Limits**

**Y. Wei**<sup>1</sup>; <sup>1</sup>LNM, Institute of Mechanics, Chinese Academy of Sciences, Beijing, China;  
Paper Id: 451

**03:40 AM** Break

**Yang International Symposium (3rd Intl. Symp. on**

**SESSION:MultiscaleTuePM2     Multiscale Material Mechanics and Multiphysics and Sustainable Applications)**

Tue Nov, 08 2016

Room: **Salon I/V**

Session Chairs: Shaoxing **Qu**; Student Monitor: Jianbo **Xie**;

**04:05 PM2:** [MultiscaleTuePM210]

[*Coupled Continuum Mechanics*] **Biochemomechanical Poroelastic Theory Of Tumor Growth**

**X. Feng**<sup>1</sup>; <sup>1</sup>Tsinghua University, Beijing, China;  
Paper Id: 471

**04:30 PM2:** [MultiscaleTuePM211]

[*Coupled Continuum Mechanics*] **Size Effect In Nanomaterials**

**S. Chen**<sup>1</sup>; Y. Yao<sup>2</sup>; <sup>1</sup>Institute of Advanced Structure Technology, Beijing Institute of Technology, Beijing, China; <sup>2</sup>LNM, Institute of Mechanics, Chinese Academy of Sciences, Beijing, China;  
Paper Id: 321

**04:55 PM2:** [MultiscaleTuePM212]

[*Experimental Nanomechanics*] **Enhanced Polarization And Fracture Strength In P(VDF-TrFE) Copolymer Films by Tailored Electric Cyclings**

**F. Fang**<sup>1</sup>; W. Jing<sup>2</sup>; W. Yang<sup>2</sup>; <sup>1</sup>, Beijing, China; <sup>2</sup>Tsinghua University, Beijing, China;  
Paper Id: 447

**05:20 PM2:** [MultiscaleTuePM213]

[*Multiscale Computational Mechanics*] **Multiscale and Multiphysics Modeling of Materials**

**T. Zhu**<sup>1</sup>; <sup>1</sup>Georgia Institute of Technology, Atlanta, United States;

Paper Id: 293

**05:45 PM** Organized Activities

**08:30 AM - 10:30 PM** [SUMMIT PLENARY](#)

**10:30 AM** Break

<b>SESSION:MineralTueAM.</b>	<b>Starkey International Symposium (3rd Intl. Symp. on Sustainable Mineral Processing: Principles, Technologies and Industrial Practice)</b>
Tue Nov, 08 2016	Room: <b>JASMINE</b>
<u>Session Chairs:</u> Fisher <b>Wang</b> ; Jafar <b>Safarian</b> ; <u>Student Monitor:</u> TBA	

**10:55 AM.:** [MineralTueAM.02]

**Smelting-Reduction Of Bauxite For Sustainable Alumina Production**

**J. Safarian**<sup>1</sup>; L. Kolbeinsen<sup>2</sup>; <sup>1</sup>, Trondheim, Norway; <sup>2</sup>Professor, Trondheim, Norway;

Paper Id: 87

**11:20 AM.:** [MineralTueAM.03]

**Effect of Speed on Energy Efficiency in Tumbling Mills**

**F. Wang**<sup>1</sup>; T. Cebeci<sup>1</sup>; B. Klein<sup>2</sup>; <sup>1</sup>University of British Columbia, Vancouver, Canada; <sup>2</sup>UBC, Vancouver, Canada;

Paper Id: 438

**11:45 AM.:** [MineralTueAM.04]

**Desulfurization Of High-Sulfur Bauxite In China**

**J. Yin**<sup>1</sup>; N. Deng<sup>2</sup>; X. Zhou<sup>2</sup>; X. Xiaoyan<sup>1</sup>; X. Yuan<sup>3</sup>; X. Wentang<sup>1</sup>; <sup>1</sup>, Chongqing, China; <sup>2</sup>Chongqing University of Science & Technology, Chongqing, China; <sup>3</sup>, chongqing, China;

Paper Id: 150

**12:10 AM.:** [MineralTueAM.05]

**Treatment Of The Acid Waters From The Artana Mine**

**B. Mustafa**<sup>1</sup>; S. Kelmendi<sup>2</sup>; A. Vitaku<sup>3</sup>; N. Murati<sup>3</sup>; <sup>1</sup>Trepca Min.& Metall.

Company;University of Prishtina, Mitrovica, Kosovo; <sup>2</sup>Faculty of Geo-sciences and technology, Pristine University, Mitrovica, Kosovo; <sup>3</sup>University of Prishtina, Mitrovica, Kosovo;

Paper Id: 177

**12:50 PM LUNCH**

**Starkey International Symposium (3rd Intl. Symp. on Sustainable Mineral Processing: Principles, Technologies and Industrial Practice)**  
SESSION: **MineralTuePM1**

Tue Nov, 08 2016

Room: **JASMINE**

Session Chairs: Oluwole **Adigun**; Brian **Loveday**; Student Monitor: TBA

**02:00 PM1:** [MineralTuePM106]

**Extraction Of Potash Values From Silicate Rocks**

**N. Dhawan**<sup>1</sup>; <sup>1</sup>IIT-Roorkee, roorkee, India;

Paper Id: 248

**02:25 PM1:** [MineralTuePM107]

**HPGR Performance: Laboratory to Plant operations**

**N. Dhawan**<sup>1</sup>; <sup>1</sup>IIT-Roorkee, roorkee, India;

Paper Id: 249

**02:50 PM1:** [MineralTuePM108]

**Recovery Samarium Oxide from SmCo-Containing Slurry by Hydrometallurgy**

**K. Shih**<sup>1</sup>; **W. Chen**<sup>2</sup>; <sup>1</sup>National Cheng Kung University, Tainan, Taiwan ("Chinese Taipei" for IOC); <sup>2</sup>Resources Recycling and Management Research Center, National Cheng Kung University, Tainan City, Taiwan ("Chinese Taipei" for IOC);

Paper Id: 285

**03:15 PM1:** [MineralTuePM109] Plenary

**The Use Of A Mixture Of Balls And Pebbles To Reduce Power And Ball Consumption**

**B. Loveday**<sup>1</sup>; **S. Nkwanyana**<sup>2</sup>; <sup>1</sup>University of Kwazulu-Natal, Durban, South Africa (zuid Afrika); <sup>2</sup>Postgraduate Student, Durban, South Africa (zuid Afrika);

Paper Id: 313

**03:40 AM Break**

**Starkey International Symposium (3rd Intl. Symp. on Sustainable Mineral Processing: Principles, Technologies and Industrial Practice)**  
SESSION: **MineralTuePM2**

Tue Nov, 08 2016

Room: **JASMINE**

Session Chairs: Shanpeng **Li**; Student Monitor: TBA

**04:05 PM2:** [MineralTuePM210]

**Ecological Importance of New Water-Vapor Processing of Metal Sulfide Concentrates**

**G. Karamyan**<sup>1</sup>; **K. Hakobyan**<sup>1</sup>; **A. Hakobyan**<sup>1</sup>; <sup>1</sup>Institute of Chemical Physics of NAS of Armenia, Yerevan, Armenia;

Paper Id: 319

**04:30 PM2:** [MineralTuePM211]

## Research on Defluorization Mechanism in Bastnaesite Calcining Processing

S. Sun<sup>1</sup>; Y. Yang<sup>2</sup>; J. Chen<sup>2</sup>; X. Zhu<sup>2</sup>; X. Huang<sup>1</sup>; S. Lu<sup>1</sup>; <sup>1</sup>Northeastern University, Shenyang, China; <sup>2</sup>northeastern university, Shenyang, China;  
Paper Id: 412

04:55 PM2: [MineralTuePM212]

## Application of JKSimMet simulation for performance optimization of Wushan SABC circuit

P. Wang<sup>1</sup>; <sup>1</sup>University of Science and Technology Beijing, Beijing, China;  
Paper Id: 416

05:20 PM2: [MineralTuePM213]

## Transformation Practice Of Crushing Circuit Of Zhenyuan Gold Mine

X. Hui<sup>1</sup>; P. Li<sup>1</sup>; J. Wang<sup>2</sup>; <sup>1</sup>China Gold Science and Technology Co.Ltd., Beijing, China; <sup>2</sup>Yunnan Gold Co.Ltd., Kunming, China;  
Paper Id: 454

05:45 PM Organized Activities

08:30 AM - 10:30 PM [SUMMIT PLENARY](#)

10:30 AM Break

SESSION: **MoltenTueAM.** **4th Intl. Symp. on Sustainable Molten Salt and Ionic Liquid Processing**

Tue Nov, 08 2016

Room: **HERB II**

Session Chairs: Joseph **Magee**; Student Monitor: TBA

10:55 AM.: [MoltenTueAM.02]

## Electrochemistry and Separation of UF<sub>4</sub> in LiCl-KCl Eutectic

T. Zhu<sup>1</sup>; <sup>1</sup>Shanghai Institute of Applied Physics, Chinese Academy and Sciences, Shanghai, China;  
Paper Id: 156

11:20 AM.: [MoltenTueAM.03]

## Some News About Speciation In Molten Fluorides... Or... A Successful Connection Between Experiments And Modeling

C. Bessada<sup>1</sup>; K. Machado<sup>1</sup>; D. Zanghi<sup>1</sup>; S. Cadars<sup>2</sup>; V. Sarou Kanian<sup>1</sup>; M. Salanne<sup>3</sup>; <sup>1</sup>CNRS CEMHTI, Orleans, France; <sup>2</sup>CNRS-IMN, Nantes, France; <sup>3</sup>CNRS PHENIX, Paris, France;  
Paper Id: 400

11:45 AM.: [MoltenTueAM.04]

## Mixing Enthalpy of LnX<sub>3</sub>-MX Lanthanide(III)-Alkali Metal Halide Systems

L. Rycerz<sup>1</sup>; I. Chojnacka<sup>1</sup>; S. Gadzuric<sup>2</sup>; M. Gaune Escard<sup>3</sup>; <sup>1</sup>Wroclaw University of Science and Technology, Wroclaw, Poland; <sup>2</sup>Faculty of Sciences, University of Novi Sad, Novi Sad, Serbia and Montenegro (formerly Yugoslavia); <sup>3</sup>Aix-Marseille Université/Polytech, CNRS/IUSTI UMR7343, Marseille, France;  
Paper Id: 428

**12:10 AM.**: [MoltenTueAM.05]

**Carbochlorination of Modified Titanium-bearing Blast Furnace Slag in Molten Salts**

**F. Nianxin**<sup>1</sup>; <sup>1</sup>Northeastern University, Shenyang, China;

Paper Id: 55

**12:50 PM LUNCH**

SESSION: **MoltenTuePM1** **4th Intl. Symp. on Sustainable Molten Salt and Ionic Liquid Processing**

Tue Nov, 08 2016

Room: **HERB II**

Session Chairs: Peter **Hesemann**; Student Monitor: TBA

**02:00 PM1**: [MoltenTuePM106]

**Liquidus Temperature and Structural Ions of REF3-LiF (RE=La, Nd) Molten Salts**

**X. Zhu**<sup>1</sup>; **S. Sun**<sup>2</sup>; **J. Chen**<sup>1</sup>; **S. Lu**<sup>2</sup>; **X. Huang**<sup>2</sup>; <sup>1</sup>northeastern university, Shenyang, China; <sup>2</sup>Northeastern University, Shenyang, China;

Paper Id: 413

**02:25 PM1**: [MoltenTuePM107]

**Ionosilicas: Organosilicas From Silylated Ionic Liquid Precursors**

**P. Hesemann**<sup>1</sup>; **B. Prelot**<sup>1</sup>; **U. Thach**<sup>1</sup>; **R. Bouchal**<sup>1</sup>; <sup>1</sup>Institut Charles Gerhardt de Montpellier, Montpellier, France;

Paper Id: 440

SESSION: **RecyclingTuePM2**

**4th Intl. Symp. on Sustainable Materials Recycling Processes and Products**

Tue Nov, 08 2016

Room: **HERB II**

Session Chairs: Juergen **Antrekowitsch**; Student Monitor: Feng Li;

**04:05 PM2**: [RecyclingTuePM210] Invited

**Dust Hazards And Safety Measures Related To Photovoltaic Panel Recycling**

**G. Granata**<sup>1</sup>; **N. Paltrinieri**<sup>2</sup>; **N. Mingotti**<sup>3</sup>; <sup>1</sup>Waseda University, Shinjuku, Japan; <sup>2</sup>Norwegian University of Science and Technology, Dept. of Production and Quality Engineering, Trondheim, Norway; <sup>3</sup>University of Cambridge, BP Institute, Cambridge CB3 0EZ, United Kingdom (Great Britain);

Paper Id: 265

**04:55 PM2**: [RecyclingTuePM212] Plenary

[*Solid and liquid wastes from industrial processes: Innovations in material recovery and environmental protection*]**Physical And Chemical Treatment Of End Of Life Si-**

**Based And CDTE Photovoltaic Panels**

**F. Pagnanelli**<sup>1</sup>; **E. Moscardini**<sup>2</sup>; **T. Abo Atia**<sup>3</sup>; **P. Altimari**<sup>3</sup>; **L. Toro**<sup>3</sup>; <sup>1</sup>Sapienza University of Rome, Rome, Italy; <sup>2</sup>Universita , Roma, Italy; <sup>3</sup>Sapienza University, Rome, Italy;

Paper Id: 247

**05:20 PM2:** [RecyclingTuePM213]

[*Solid and liquid wastes from industrial processes: Innovations in material recovery and environmental protection*]

**Leaching Kinetics Of Ladle Furnace Waste Slag By Ammonium Chloride Solution**

F. Li <sup>1</sup> ; G. Ma <sup>2</sup> ; Z. Tong <sup>3</sup> ; <sup>1</sup>Key Laboratory for Ferrous Metallurgy and Resources Utilization of Ministry of Education, Wuhan University of Science and Technology, Wuhan, China; <sup>2</sup>Key Laboratory for Ferrous Metallurgy and Resources Utilization of Ministry of Education, Wuhan University of Science and Technology, Wuhan 430081, China; <sup>3</sup>The State Key Laboratory of Refractories and Met, wuhan, China; <sup>3</sup>Key Laboratory for Ferrous Metallurgy and Resources Utilization of Ministry of Education, Wuhan University of Science and Technology, P.R. China, 430081, WuHan, China;

Paper Id: 120

**05:45 PM** Organized Activities

## Wednesday:

08:30 AM - 10:30 PM [SUMMIT PLENARY](#)

10:30 AM Break

SESSION: **RotaryKilnWedAM.**

**Intl. Symp. on Rotary Kiln Operations for Sustainable Products**

Wed Nov, 09 2016

Room: **VANILA**

Session Chairs: Pavel **Kozlov**; Student Monitor: TBA

**10:55 AM.:** [RotaryKilnWedAM.02]

### **Research And Development Of Technogenic Wastes Recycling With Recovery Of Zn, Pb and Sn**

**P. Kozlov**<sup>1</sup>; Y. Reshetnikov<sup>2</sup>; <sup>1</sup>Chelyabinsk Zinc Plant, Chelyabinsk, Russian Federation; <sup>2</sup>PJSC Chelyabinsk Zinc Plant, Chelyabinsk, Russian Federation;  
Paper Id: 362

**11:20 AM.:** [RotaryKilnWedAM.03]

### **[Thermotechnics (Combustion Engineering)] Skull-Formation In Rotary Kilns During Processing Of Various Types Of Oxidized Raw Materials**

**P. Kozlov**<sup>1</sup>; <sup>1</sup>Chelyabinsk Zinc Plant, Chelyabinsk, Russian Federation;  
Paper Id: 216

**11:45 AM.:** [RotaryKilnWedAM.04]

### **Productivity Increase Of Industrial Rotary Kilns That Produce Magnesite Through A New Oxygen Enrichment Technology**

**S. Imeri**<sup>1</sup>; F. Kongoli<sup>2</sup>; E. Obrien<sup>3</sup>; <sup>1</sup>MIM-GOLESH, Prishtina, Kosovo; <sup>2</sup>Flogen Technologies Inc., Mont-Royal, Canada; <sup>3</sup>FLOGEN TECHNOLOGIES INC, Wilmington, United States;  
Paper Id: 141

SESSION: **CoatingsWedPM1**

**3rd Intl. Symp. on Sustainable Surface and Interface Engineering: Coatings for Extreme Environments**

Wed Nov, 09 2016

Room: **VANILA**

Session Chairs: Pawel **Rokicki**; Yanmei **Yue**; Student Monitor: TBA

**02:00 PM1:** [CoatingsWedPM106] Invited

### **Different Type Tin Based Protective Coatings Structures For Aircraft Engine Compressor Blades**

**P. Rokicki**<sup>1</sup>; T. Cieciva<sup>1</sup>; K. Dychton<sup>1</sup>; M. Goral<sup>1</sup>; M. Drajewicz<sup>1</sup>; <sup>1</sup>Rzeszow University of Technology, Research and Development Laboratory for Aerospace Materials, Rzeszow, Poland;  
Paper Id: 67



**02:25 PM1:** [CoatingsWedPM107] Invited

**Size-dependent behaviors of Kirchhoff microplate with surface stress and surface induced residual stresses**

Y. Yue <sup>1</sup>; <sup>1</sup>Shanghai Universtiy, Shanghai, China;

Paper Id: 320

**02:50 PM1:** [CoatingsWedPM108]

**Heat-resistant iron-chromium alloys for protective coatings of operating units of power plants**

A. Kandelaki <sup>1</sup>; O. Mikadze <sup>2</sup>; V. Garibashvili <sup>1</sup>; G. Mikadze <sup>2</sup>; Z.

Mirijanashvili <sup>3</sup>; <sup>1</sup>Ferdinand Tavadze Institute of Metallurgy and Materials Science, Tbilisi, Georgia; <sup>2</sup>Georgian Technical University, Tbilisi, Georgia; <sup>3</sup>Ferdinand Tavadze Institute of metallurgy and Materials Science, Tbilisi, Georgia;

Paper Id: 77

**03:15 PM1:** [CoatingsWedPM109]

**Investigation on the microstructure and Properties of Chemical Plating Ni-P and Ni-W-P**

C. Bao <sup>1</sup>; <sup>1</sup>Shenyang blower works group company, Dalian, China;

Paper Id: 105

**03:40 AM** Break

<b>4th Intl. Symp. on Composite, Ceramic and Nano Materials Processing, Characterization and Applications</b>	
<b>SESSION:CompositeWedPM2</b>	
Wed Nov, 09 2016	Room: <b>VANILA</b>
<u>Session Chairs:</u> Philip <b>Nash</b> ; Yingxu <b>Li</b> ; <u>Student Monitor:</u> TBA	

**04:05 PM2:** [CompositeWedPM210] Plenary

**The Large Scale Synthesis of Aligned Plate Nanostructures**

P. Nash <sup>1</sup>; Y. Zhou <sup>2</sup>; <sup>1</sup>IIT, Chicago, United States; <sup>2</sup>Illinois Institute of Technology, CHICAGO, United States;

Paper Id: 182

**04:30 PM2:** [CompositeWedPM211]

**Effect of inhomogeneous composition on the superconducting properties of practical superconductor**

Y. Li <sup>1</sup>; G. Kang <sup>2</sup>; <sup>1</sup>Southwest Jiaotong University, Chengdu, China; <sup>2</sup>Applied Mechanics and Structure Safety Key Laboratory of Sichuan Province, School of Mechanics and Engineering, Southwest Jiaotong University, Chengdu, China;

Paper Id: 266

**04:55 PM2:** [CompositeWedPM212]

**Functionalization of carbon nanomaterials and their application in H2 gas sensor**

S. Dhall <sup>1</sup>; <sup>1</sup>NIT, Kurukshetra, Kurukshetra, India;

Paper Id: 350

08:30 AM - 10:30 PM **SUMMIT PLENARY**

10:30 AM Break

SESSION: **EnergyWedAM.** 3rd Intl. Symp. on Sustainable Energy Production:  
**Gas/Oil/Shale; Coal; Nuclear; Waste/Bioprocessing  
and renewables: wind/waves**

Wed Nov, 09 2016

Room: **PENINSULA**

Session Chairs: Maryam **Dehghani**; Abdollah **Esmaeili**; Student Monitor: TBA

**10:55 AM.:** [EnergyWedAM.02]

**Sand Production Mechanisms in an Oil Reservoir**

**M. Dehghani**<sup>1</sup>; <sup>1</sup>National Iranian South Oil Company (NISOC) - National Iranian Oil Company (NIOC), Omidieh, Iran (Islamic Republic of Iran);

Paper Id: 386

**11:20 AM.:** [EnergyWedAM.03]

**Permeability Determination Based on Shale Volume in a Sandstone Reservoir**

**A. Esmaeili**<sup>1</sup>; <sup>1</sup>National Iranian South Oil Company (NISOC) - National Iranian Oil Company (NIOC), Omiodieh, Iran (Islamic Republic of Iran);

Paper Id: 381

**11:45 AM.:** [EnergyWedAM.04]

**Experimental Investigation of Capillary Imbibition Phenomena in a Naturally Fractured Carbonate Reservoir**

**A. Esmaeili**<sup>1</sup>; <sup>1</sup>National Iranian South Oil Company (NISOC) - National Iranian Oil Company (NIOC), Omiodieh, Iran (Islamic Republic of Iran);

Paper Id: 382

**12:10 AM.:** [EnergyWedAM.05]

**Multiple Hydraulic Fractured Vertical Wells in Gas Condensate Reservoirs**

**A. Esmaeili**<sup>1</sup>; <sup>1</sup>National Iranian South Oil Company (NISOC) - National Iranian Oil Company (NIOC), Omiodieh, Iran (Islamic Republic of Iran);

Paper Id: 375

12:50 PM LUNCH

SESSION: **EnergyWedPM1** 3rd Intl. Symp. on Sustainable Energy Production:  
**Gas/Oil/Shale; Coal; Nuclear; Waste/Bioprocessing  
and renewables: wind/waves**

Wed Nov, 09 2016

Room: **PENINSULA**

Session Chairs: Fatemeh **Dehghani**; Abdollah **Esmaeili**; Student Monitor: TBA

**02:00 PM1:** [EnergyWedPM106]

**Use of Supercritical Carbon Dioxide in Underbalanced Drilling Operation**

**A. Esmaeili**<sup>1</sup>; <sup>1</sup>National Iranian South Oil Company (NISOC) - National Iranian Oil Company (NIOC), Omiodieh, Iran (Islamic Republic of Iran);

Paper Id: 376

**02:25 PM1:** [EnergyWedPM107]

**Prediction Methods of Sand Production for an Oil Well**

**A. Esmaeili**<sup>1</sup>; <sup>1</sup>National Iranian South Oil Company (NISOC) - National Iranian Oil Company (NIOC), Omiodieh, Iran (Islamic Republic of Iran);

Paper Id: 377

**02:50 PM1:** [EnergyWedPM108]

**Minimum Miscibility Pressure Prediction for an Oil Reservoir**

**A. Esmaeili**<sup>1</sup>; <sup>1</sup>National Iranian South Oil Company (NISOC) - National Iranian Oil Company (NIOC), Omiodieh, Iran (Islamic Republic of Iran);

Paper Id: 378

**03:15 PM1:** [EnergyWedPM109]

**Produced Water Reinjection into an Oil Reservoir and Formation Damage**

**A. Esmaeili**<sup>1</sup>; <sup>1</sup>National Iranian South Oil Company (NISOC) - National Iranian Oil Company (NIOC), Omiodieh, Iran (Islamic Republic of Iran);

Paper Id: 379

**03:40 AM Break**

<b>3rd Intl. Symp. on Sustainable Energy Production: Gas/Oil/Shale; Coal; Nuclear; Waste/Bioprocessing and renewables: wind/waves</b>	
SESSION: <b>EnergyWedPM2</b>	
Wed Nov, 09 2016	Room: <b>PENINSULA</b>
Session Chairs: Maryam <b>Dehghani</b> ; Abdollah <b>Esmaeili</b> ; Student Monitor: TBA	

**04:05 PM2:** [EnergyWedPM210]

**Effects of Microwave Radiation on Oil Recovery**

**F. Dehghani**<sup>1</sup>; <sup>1</sup>Jahad Daneshghahi University, Omidieh, Iran (Islamic Republic of Iran);

Paper Id: 388

**04:30 PM2:** [EnergyWedPM211]

**Applications of Fiber Optical Sensors in Petroleum Industry**

**F. Dehghani**<sup>1</sup>; <sup>1</sup>Jahad Daneshghahi University, Omidieh, Iran (Islamic Republic of Iran);

Paper Id: 389

**04:55 PM2:** [EnergyWedPM212]

**Sand Production Management for Oil and Gas Reservoirs**

**F. Dehghani**<sup>1</sup>; <sup>1</sup>Jahad Daneshghahi University, Omidieh, Iran (Islamic Republic of Iran);

Paper Id: 390

08:30 AM - 10:30 PM **SUMMIT PLENARY**

10:30 AM Break

SESSION: **MetalsWedAM.**

**Yagi International Symposium (2nd Intl. Symp. on Sustainable Metals & Alloys Processing)**

Wed Nov, 09 2016

Room: **OCEAN**

Session Chairs: Tateo **Usui**; Student Monitor: TBA

**10:55 AM.:** [MetalsWedAM.02] Keynote

**Acceleration Mechanism of Reduction of Iron Ore-Carbon Composite by Increasing Pressure**

**T. Murakami**<sup>1</sup>; H. Nagashima<sup>1</sup>; Q. Zhou<sup>1</sup>; E. Kasai<sup>2</sup>; <sup>1</sup>Tohoku University, Sendai, Japan; <sup>2</sup>Graduate School of Environmental Studies, Tohoku University, Sendai, Japan;  
Paper Id: 61

**11:20 AM.:** [MetalsWedAM.03] Keynote

**Effect of Roasting Temperature and Time on Carbonate Iron Ore Oxidation Process**

**M. Chu**<sup>1</sup>; Y. Tang<sup>1</sup>; J. Tang<sup>1</sup>; L. You<sup>1</sup>; F. Li<sup>1</sup>; Z. Liu<sup>1</sup>; <sup>1</sup>Northeastern University, Shenyang, China;  
Paper Id: 29

**11:45 AM.:** [MetalsWedAM.04] Invited

**Use Of Oil Palm Solid Waste To Enhance Magnetic Properties Of Malaysian Iron Ore By Reduction Treatment**

**H. Purwanto**<sup>1</sup>; <sup>1</sup>Kulliyyah of Engineering, International Islamic University Malaysia, Kuala Lumpur, Malaysia;  
Paper Id: 353

**12:10 AM.:** [MetalsWedAM.05]

**Enrichment and Recovery Fe-containing Phases from High Iron Gibbsite Ore Based on Metallized Reduction and Magnetic Separation**

**Z. Liu**<sup>1</sup>; M. Chu<sup>1</sup>; W. Zhao<sup>1</sup>; H. Wang<sup>1</sup>; Z. Wang<sup>1</sup>; J. Tang<sup>1</sup>; C. Feng<sup>2</sup>; Y. Tang<sup>1</sup>; <sup>1</sup>Northeastern University, Shenyang, China; <sup>2</sup>, Shenyang, China;  
Paper Id: 41

12:50 PM LUNCH

SESSION: **MetalsWedPM1**

**Yagi International Symposium (2nd Intl. Symp. on Sustainable Metals & Alloys Processing)**

Wed Nov, 09 2016

Room: **OCEAN**

Session Chairs: Mansheng **Chu**; Student Monitor: TBA

**02:00 PM1:** [MetalsWedPM106] Keynote

**Industrial Solids Processing Applications: Particle Reaction Models and Bed Combustion Models**

**S. Choi**<sup>1</sup>; <sup>1</sup>Korea Institute of Science and Technology, Department of Mechanical Engineering, Daejeon, Korea (Republic of [South] Korea);  
Paper Id: 298

**02:25 PM1:** [MetalsWedPM107] Keynote

**Analysis of Particle Temperature in Rotary Kiln Using Techniques of Particle Tracking and Switching Heat Transfer Mechanism**

**H. Nogami**<sup>1</sup>; T. Mochizuki<sup>1</sup>; T. Kon<sup>1</sup>; <sup>1</sup>Tohoku University, Sendai, Japan;  
Paper Id: 162

**02:50 PM1:** [MetalsWedPM108]

**Study of Gas Fuel or Liquid Fuel Injection Technology in Iron Ore Sintering Process**

**Y. Iwami**<sup>1</sup>; K. Takehara<sup>1</sup>; K. Iwase<sup>1</sup>; T. Yamamoto<sup>1</sup>; H. Matsuno<sup>1</sup>; <sup>1</sup>JFE Steel Corporation, Fukuyama, Japan;  
Paper Id: 54

**03:15 PM1:** [MetalsWedPM109]

**Research And Application Of Sintering High-Temperature Characteristics Of Iron Ore**

**B. Su**<sup>1</sup>; S. Wu<sup>2</sup>; X. Zhai<sup>2</sup>; <sup>1</sup>The University of Science and Technology Beijing, BeiJing, China; <sup>2</sup>University of Science and Technology Beijing, Beijing, China;  
Paper Id: 56

**03:40 AM** Break

SESSION: **MetalsWedPM2** **Yagi International Symposium (2nd Intl. Symp. on Sustainable Metals & Alloys Processing)**

Wed Nov, 09 2016

Room: **OCEAN**

Session Chairs: Hiroshi **Nogami**; Student Monitor: TBA

**04:05 PM2:** [MetalsWedPM210]

**Investigation For Optimum Conditions Of Wakayama Briquetting Process**

**M. Kenichi**<sup>1</sup>; <sup>1</sup>Nippon Steel •Sumikin Koutetsu Wakayama Corporation, Wakayama-shi, Japan;  
Paper Id: 152

**04:30 PM2:** [MetalsWedPM211]

**A Lattice Gas Cellular Automata Model For the Simulation of Gas Flow Over A Solid Particle with Chemical Reaction**

**K. He**<sup>1</sup>; Z. Zheng<sup>2</sup>; Z. Chen<sup>3</sup>; H. Chen<sup>2</sup>; P. Zhou<sup>2</sup>; M. Tian<sup>2</sup>; <sup>1</sup>, Chongqing, China; <sup>2</sup>Chongqing University, Chongqing, China; <sup>3</sup>University of British Columbia, Vancouver, Canada;  
Paper Id: 49

**04:55 PM2:** [MetalsWedPM212]

**Burden distribution in the COREX shaft furnace with DEM simulation**

**M. Kou**<sup>1</sup>; S. Wu<sup>1</sup>; <sup>1</sup>University of Science and Technology Beijing, Beijing, China;

**05:20 PM2:** [MetalsWedPM213]

**Hazarding The Effects Of The Silica Nanoparticles On The Transport Of Hazardous Nanoparticles Into Leachate Through Landfills Soils Columns**

**E. Oliveira**<sup>1</sup>; A. Santos Francisco<sup>2</sup>; L. Rollim Lopes<sup>2</sup>; M. De Campos<sup>3</sup>; J. De Castro<sup>3</sup>; <sup>1</sup>Center for Technological Education Celso Suckow da Fonseca, Valença, Brazil; <sup>2</sup>UFF, Volta Redonda, Brazil; <sup>3</sup>UFF - Federal Fluminense University, Volta Redonda, Brazil;

Paper Id: 183

**05:45 PM** Organized Activities

**08:30 AM - 10:30 PM** [SUMMIT PLENARY](#)

**10:30 AM** Break

SESSION: **IronWedAM.** **D'Abreu International Symposium (4th Intl. Symp. on Advanced Sustainable Iron and Steel Making)**

Wed Nov, 09 2016 Room: **GINKO**

Session Chairs: Jose Carlos **D Abreu**; Student Monitor: TBA

**10:55 AM.:** [IronWedAM.02] Invited

**Zinc Behavior During Hydrogen Reduction Of Zinc And Iron Oxides Mixture**

**E. Brocchi**<sup>1</sup>; R. Siqueira<sup>2</sup>; P. Oliveira Barreto<sup>2</sup>; M. Motta<sup>3</sup>; <sup>1</sup>PUC-Rio, Rio de Janeiro, Brazil; <sup>2</sup>Pontifical Catholic University of Rio de Janeiro, RIO DE JANEIRO, Brazil; <sup>3</sup>Basck Ltd, Cambridge, Great Britain;

Paper Id: 316

**11:20 AM.:** [IronWedAM.03]

**A Novel Method Of Arsenic Encapsulation From High-Arsenic Contaminated Acid By The Formation Of Scorodite**

**X. Zhu**<sup>1</sup>; Z. Xing<sup>2</sup>; <sup>1</sup>Faculty of Metallurgical and Energy Engineering, Kunming University of Science and Technology State Key Laboratory of Complex Nonferrous Metal Resources Clean Utilization, Kunming, China; <sup>2</sup>Faculty of Metallurgical and Energy Engineering, Kunming University of Science and Technology State Key Laboratory of Complex Nonferrous Metal Resources Clean Utilization, Kunming 650093, China;

Paper Id: 286

**11:45 AM.:** [IronWedAM.04]

**Use of Artificial Intelligence for Process Optimization. Electric Arc Furnace in Steel Industry as an example.**

**G. Fernandez Diaz**<sup>1</sup>; <sup>1</sup>AMIGE International, Monterrey, Mexico;

Paper Id: 290

**12:10 AM.:** [IronWedAM.05]

**Pellet Porosimetry by X-Ray MicroCT - An Environment Friendly Approach**

**K. Augusto**<sup>1</sup>; S. Paciornik<sup>1</sup>; O. Gomes<sup>2</sup>; M. Mauricio<sup>1</sup>; <sup>1</sup>DEQM PUC-Rio, Rio de Janeiro, Brazil; <sup>2</sup>CETEM/MCTI, Rio de Janeiro, Brazil;  
Paper Id: 295

**12:50 PM LUNCH**

**SESSION:IronWedPM1**      **D'Abreu International Symposium (4th Intl. Symp. on Advanced Sustainable Iron and Steel Making)**  
Wed Nov, 09 2016      Room: **GINKO**  
Session Chairs: Jose Adilson **de Castro**; Hongsong **Han**; Student Monitor: TBA

**02:00 PM1:** [IronWedPM106]

**Microstructure and properties of the pipe steel microalloyed by boron**

**A. Upolovnikova**<sup>1</sup>; A. Babenko<sup>1</sup>; V. Zhuchkov<sup>2</sup>; A. Sychev<sup>3</sup>; N. Sel'menskikh<sup>4</sup>; A. Akberdin<sup>5</sup>; <sup>1</sup>Institute of Metallurgy, Ekaterinburg, Russian Federation; <sup>2</sup>Institute of Metallurgy of Ural Division of RAS, Ekaterinburg, Russian Federation; <sup>3</sup>, Ekaterinburg, Russian Federation; <sup>4</sup>Institute of Metallurgy, Ural Branch of the Russian Academy of Science, Yekaterinburg, Russian Federation; <sup>5</sup>Chemical and Metallurgical Institute named after Zh.Abishev, Karaganda, Kazakhstan;  
Paper Id: 302

**02:25 PM1:** [IronWedPM107]

**Direct Microalloying By Boron Of Low Carbon Steel By Slag NaI- SiO<sub>2</sub> - IgO-Al<sub>2</sub>O<sub>3</sub> - A<sub>2</sub>O<sub>3</sub> With Colemanite**

**A. Babenko**<sup>1</sup>; V. Zhuchkov<sup>2</sup>; A. Sychev<sup>3</sup>; A. Upolovnikova<sup>1</sup>; A. Akberdin<sup>4</sup>; <sup>1</sup>Institute of Metallurgy, Ekaterinburg, Russian Federation; <sup>2</sup>Institute of Metallurgy of Ural Division of RAS, Ekaterinburg, Russian Federation; <sup>3</sup>, Ekaterinburg, Russian Federation; <sup>4</sup>Chemical and Metallurgical Institute named after Zh.Abishev, Karaganda, Kazakhstan;  
Paper Id: 303

**02:50 PM1:** [IronWedPM108]

**Influence of blast furnace running intensity on the ironmaking process efficiency**

**I. Kurunov**<sup>1</sup>; S. Filatov<sup>1</sup>; D. Tikhonov<sup>2</sup>; <sup>1</sup>NLMK, Lipetsk, Russian Federation; <sup>2</sup>Novolipetsk Steel, Lipetsk, Rwanda;  
Paper Id: 367

**03:15 PM1:** [IronWedPM109]

**The effect of ratio and slag thickness on the Vibrating Electrode Electroslag Remelting Process**

**F. Wang**<sup>1</sup>; B. Li<sup>1</sup>; <sup>1</sup>Northeastern University, Shenyang, China;  
Paper Id: 417

**03:40 AM Break**

SESSION: **IronWedPM2** **D'Abreu International Symposium (4th Intl. Symp. on Advanced Sustainable Iron and Steel Making)**

Wed Nov, 09 2016 Room: **GINKO**

Session Chairs: Anatoly **Babenko**; Edelink Efrain **Tinoco Falero**; Student Monitor: TBA

**04:05 PM2:** [IronWedPM210]

**Coal Source Of Carbon And Energy In Ironmaking Processes**

**P. Prakash**<sup>1</sup>; <sup>1</sup>National Metallurgical Laboratory, Jamshedpur, India;

Paper Id: 238

**04:30 PM2:** [IronWedPM211]

**Practice of Blast Furnace Operation with Slag System Optimization in Meishan Steel**

**H. Han**<sup>1</sup>; <sup>1</sup>Northeastern University, Shenyang, China;

Paper Id: 42

**04:55 PM2:** [IronWedPM212]

**Coke Quality And Technology Of Blast Furnace Smelting**

**D. Tikhonov**<sup>1</sup>; **I. Kurunov**<sup>2</sup>; **S. Filatov**<sup>2</sup>; <sup>1</sup>Novolipetsk Steel, Lipetsk, Rwanda; <sup>2</sup>NLMK, Lipetsk, Russian Federation;

Paper Id: 368

**08:30 AM - 10:30 PM** [\*\*SUMMIT PLENARY\*\*](#)

**10:30 AM** Break

SESSION: **MetalsWedAM.** **Yagi International Symposium (2nd Intl. Symp. on Sustainable Metals & Alloys Processing)**

Wed Nov, 09 2016 Room: **Salon III/IV**

Session Chairs: Volodymyr **Kochura**; Student Monitor: TBA

**10:55 AM.:** [MetalsWedAM.02]

**Influence Of Coal Gas Pressure On Coke Cake Extrusion Behaviors And Oven Wall Displacement Of Commercial Coke Oven**

**S. Aizawa**<sup>1</sup>; **T. Kawaguchi**<sup>2</sup>; **N. Satoh**<sup>1</sup>; **K. Uebou**<sup>1</sup>; **S. Nomura**<sup>1</sup>; <sup>1</sup>Nippon Steel and Sumitomo Metal Corporation, Futtsu, Japan; <sup>2</sup>Nippon Steel and Sumitomo Metal Corporation, Wakayama, Japan;

Paper Id: 98

**11:20 AM.:** [MetalsWedAM.03]

**Degradation Behavior Of Coke Reacting With H<sub>2</sub>O And CO<sub>2</sub> At High Temperature**

**P. Wang**<sup>1</sup>; **L. Honging**<sup>2</sup>; **J. Li**<sup>3</sup>; <sup>1</sup>, maanshan, China; <sup>2</sup>Anhui University of Science and Technology, Maanshan, China; <sup>3</sup>Anhui University of Technology, Northeastern University, maanshan, China;

Paper Id: 35



11:45 AM.: [MetalsWedAM.04]

**A New Testing And Evaluating Method Of Cokes With Greatly Varied Cri And Csr Used In Blast Furnace**

**Q. Wang**<sup>1</sup>; <sup>1</sup>, Anshan, China;

Paper Id: 27

12:10 AM.: [MetalsWedAM.05]

**Experimental Investigations Into Metallurgical Properties Evolution Of Xinjiang Lump Coal Under COREX Gasifier Condition**

**R. Xu**<sup>1</sup>; **J. Zhang**<sup>2</sup>; **Z. Liu**<sup>3</sup>; **G. Wang**<sup>2</sup>; **K. Jiao**<sup>2</sup>; **Y. Zhou**<sup>2</sup>; <sup>1</sup>, Beijing, China; <sup>2</sup>University of Science and Technology Beijing, Beijing, China; <sup>3</sup>school of Metallurgical and Ecological Engineering, University of Science and Technology Beijing, Beijing, China;

Paper Id: 38

**12:50 PM LUNCH**

SESSION: **MetalsWedPM1** **Yagi International Symposium (2nd Intl. Symp. on Sustainable Metals & Alloys Processing)**

Wed Nov, 09 2016

Room: **Salon III/IV**

Session Chairs: Guangqiang Li; Student Monitor: TBA

02:00 PM1: [MetalsWedPM106]

**The Prenucleation Alumina Clusters during Aluminum Deoxidation Reaction Process in Liquid Iron**

**G. Wang**<sup>1</sup>; <sup>1</sup>, Anshan, China;

Paper Id: 28

02:25 PM1: [MetalsWedPM107]

**Influence of Deoxidation and VOD Slag on the Inclusions' Behavior of Ti-Nb Stabilized Fe-21Cr Ferrite stainless steel**

**G. Li**<sup>1</sup>; **S. Lijuan**<sup>2</sup>; **C. Zhu**<sup>3</sup>; **J. Zhang**<sup>4</sup>; **X. Liang**<sup>3</sup>; <sup>1</sup>Wuhan University of Science and Technology, Wuhan, China; <sup>2</sup>Soochow University, Suzhou, China; <sup>3</sup>Key Laboratory for Ferrous Metallurgy and Resources Utilization of Ministry of Education, Wuhan University of Science and Technology, Wuhan, China; <sup>4</sup>School of Information Science and Engineering, Wuhan University of Science and Technology, Wuhan, China;

Paper Id: 3

02:50 PM1: [MetalsWedPM108]

**Experimental Research on Vanadium Extraction with CO<sub>2</sub> and O<sub>2</sub> Mixed Blowing**

**W. Du**<sup>1</sup>; **P. Li**<sup>1</sup>; **X. Liang**<sup>2</sup>; **Y. Wang**<sup>1</sup>; <sup>1</sup>Chongqing University, Chongqing, China; <sup>2</sup>, Chongqing, China;

Paper Id: 20

03:15 PM1: [MetalsWedPM109]

**An Iron-Slag Bath for Hot Metal Smelting Reduction and Coal Gasification**

**Y. He**<sup>1</sup>; **Y. Qu**<sup>2</sup>; **Z. Zou**<sup>1</sup>; <sup>1</sup>Northeastern University, Shenyang, China; <sup>2</sup>, Shenyang,

**03:40 AM Break**

SESSION: **MetalsWedPM2** **Yagi International Symposium (2nd Intl. Symp. on Sustainable Metals & Alloys Processing)**

Wed Nov, 09 2016 Room: **Salon III/IV**

Session Chairs: Sangmin **Choi**; Student Monitor: TBA

**04:05 PM2:** [MetalsWedPM210]

**Steelmaking: the Present and the Future. A New Paradigm of Development**

**G. Dorofeev**<sup>1</sup>; F. Kongoli<sup>2</sup>; <sup>1</sup>'Ferro-Technology', Moscow, Tula, Russian Federation; <sup>2</sup>Flogen Technologies Inc., Mont-Royal, Canada;

Paper Id: 479

**04:30 PM2:** [MetalsWedPM211]

**Reduction Kinetics Of In-Flight Molten Hematite Particle In The Hisarna Process**

**Y. Qu**<sup>1</sup>; L. Xing<sup>2</sup>; Y. Yang<sup>3</sup>; C. Zeilstra<sup>4</sup>; K. Meijer<sup>4</sup>; R. Boom<sup>3</sup>; Z. Zou<sup>2</sup>; <sup>1</sup>, Shenyang, China; <sup>2</sup>Northeastern University, Shenyang, China; <sup>3</sup>Delft University of Technology, Delft, Netherlands; <sup>4</sup>Tata Steel, IJmuiden, Netherlands;

Paper Id: 32

**04:55 PM2:** [MetalsWedPM212]

**Effect of MgO on Re-crystallization of Fe2O3 in Pellets**

**G. Qiangjian**<sup>1</sup>; W. Guo<sup>1</sup>; F. Shen<sup>2</sup>; Z. Haiyan<sup>3</sup>; S. Fengman<sup>1</sup>; <sup>1</sup>School of Metallurgy, Northeastern University, Shenyang, China; <sup>2</sup>, Shenyang, China; <sup>3</sup>School of Metallurgy, Shenyang, China;

Paper Id: 30

**05:20 PM2:** [MetalsWedPM213]

**Comparison on Self-strength of MgO<sub>1-x</sub>Fe2O3 and CaO<sub>1-x</sub>Fe2O3**

**G. He**<sup>1</sup>; S. Fengman<sup>2</sup>; G. Chuanyun<sup>3</sup>; W. Ning<sup>3</sup>; Z. Guangqiang<sup>3</sup>; G. Qiangjian<sup>2</sup>; Z. Haiyan<sup>4</sup>; W. Guo<sup>2</sup>; F. Shen<sup>5</sup>; <sup>1</sup>, Shenyang, Liaoning, China; <sup>2</sup>School of Metallurgy, Northeastern University, Shenyang, China; <sup>3</sup>, Shenyang-Liaoning-China, China; <sup>4</sup>School of Metallurgy, Shenyang, China; <sup>5</sup>, Shenyang, China;

Paper Id: 37

**05:45 PM Organized Activities**

08:30 AM - 10:30 PM **SUMMIT PLENARY**

10:30 AM Break

SESSION: **MetallicWedAM.**

**Dubois International Symposium (Intl. Symp. on Sustainable Complex Metallic Systems)**

Wed Nov, 09 2016

Room: **PALM**

Session Chairs: Jean-Marie **Dubois**; Student Monitor: TBA

**10:55 AM.:** [MetallicWedAM.02] Keynote

**Complexity Of Intermetallic Structures - Reality Or Virtuality**

**Y. Grin**<sup>1</sup>; <sup>1</sup>Max-Planck-Institut für Chemische Physik fester Stoffe, Dresden, Germany (Deutschland);

Paper Id: 498

**11:20 AM.:** [MetallicWedAM.03] Keynote

**Complexity Of Intermetallic Structures - Reality Or Virtuality**

**Y. Grin**<sup>1</sup>; <sup>1</sup>Max-Planck-Institut für Chemische Physik fester Stoffe, Dresden, Germany (Deutschland);

Paper Id: 452

**11:45 AM.:** [MetallicWedAM.04]

**The Hydrolysis Of Aluminium Nitride Powder Exploited For Advanced Materials Engineering**

**A. Kocjan**<sup>1</sup>; <sup>1</sup>Jozef Stefan Institute, Ljubljana, Slovenia;

Paper Id: 331

**12:10 AM.:** [MetallicWedAM.05]

**On The Depth Sensing Indentation On Liquid Environment For Application To Biological Tissue**

**J. Jehl**<sup>1</sup>; **G. Pierson**<sup>1</sup>; **A. Voignier**<sup>1</sup>; **R. Kouitat Njiwa**<sup>2</sup>; <sup>1</sup>Institut Jean Lamour, Nancy, France; <sup>2</sup>Institut Jean Lamour (UMR 7198 CNRS-Universite de lorraine), Nancy, France;

Paper Id: 489

12:50 PM LUNCH

SESSION: **MetallicWedPM1**

**Dubois International Symposium (Intl. Symp. on Sustainable Complex Metallic Systems)**

Wed Nov, 09 2016

Room: **PALM**

Session Chairs: Spomenka **Kobe**; Student Monitor: TBA

**02:00 PM1:** [MetallicWedPM106] Keynote

**Committed to Discovery**

**J. Lenarcic**<sup>1</sup>; <sup>1</sup>Jozef Stefan Institute, Ljubljana, Slovenia;

Paper Id: 149

**02:25 PM1:** [MetallicWedPM107] Invited

**Static And Sliding Contact Of Al-Based Quasicrystalline Coatings**

J. Dubois <sup>1</sup>; **R. Kouitat Njiwa** <sup>2</sup>; B. Silva Guedes De Lima <sup>3</sup>; S. Guedes De Lima <sup>3</sup>; R. Gomes <sup>3</sup>; <sup>1</sup>Institut Jean Lamour, Nancy, France; <sup>2</sup>Institut Jean Lamour (UMR 7198 CNRS-Universite de lorraine), Nancy, France; <sup>3</sup>Rapid solidification laboratory, federal university of Paraiba, Joao Pessoa -PB, Brazil;

Paper Id: 159

**02:50 PM1:** [MetallicWedPM108] Keynote

**Segregation-Induced Embrittlement Of Polycrystalline Ni: Reaching The Atomic Scale**

**I. Braems** <sup>1</sup>; F. Christien <sup>2</sup>; A. Karpinska <sup>3</sup>; P. Ganster <sup>2</sup>; E. Bertrand <sup>3</sup>; V. Barnier <sup>2</sup>; D. Chatain <sup>4</sup>; <sup>1</sup>IMN-CNRS, Nantes Cedex, France; <sup>2</sup>Ecole des Mines de Saint-Etienne, Saint-Etienne, France; <sup>3</sup>IMN - Universite de Nantes, Nantes, France; <sup>4</sup>CiNaM - CNRS, Marseille, France;

Paper Id: 340

<b>SESSION: MetallicWedPM2</b>	<b>Dubois International Symposium (Intl. Symp. on Sustainable Complex Metallic Systems)</b>
Wed Nov, 09 2016	Room: <b>PALM</b>
<u>Session Chairs:</u> Michael <b>Coey</b> ; <u>Student Monitor:</u> TBA	

**04:05 PM2:** [MetallicWedPM210] Plenary

**Push-Pull Alloys: The Nucleation Of Complexity In Metallic Melts**

**J. Dubois** <sup>1</sup>; S. Kobe <sup>2</sup>; <sup>1</sup>Institut Jean Lamour, Nancy, France; <sup>2</sup>Josef Stefan Institute, Ljubljana, Slovenia;

Paper Id: 89

**08:30 AM - 10:30 PM** [SUMMIT PLENARY](#)

**10:30 AM** Break

<b>SESSION: PhysicsWedAM.</b>	<b>2nd Intl. Symp. on Physics of Surfaces and Interfaces, from Fundamentals to Sustainable Applications</b>
Wed Nov, 09 2016	Room: <b>HERB I</b>
<u>Session Chairs:</u> Pingcheng Zuo; <u>Student Monitor:</u> TBA	

**10:55 AM.:** [PhysicsWedAM.02]

**Wetting and elasto-plasticity based sculpture of liquid marbles**

**P. Zuo** <sup>1</sup>; J. Liu <sup>1</sup>; <sup>1</sup>China University of Petroleum (East China), Qingdao, China;

Paper Id: 325

**11:20 AM.:** [PhysicsWedAM.03]

**Study on the two-phase pipe flow action on the elbow with erosion,cavitation and corrosion**

L. Bai <sup>1</sup>; T. Zhao <sup>2</sup>; <sup>1</sup>, Qingdao, China; <sup>2</sup>china University Of Petroleum, Qingdao, China;

Paper Id: 409

**11:45 AM.:** [PhysicsWedAM.04]

**Study on the Interface between the Ceramic and Metal Composite**

Y. Liu <sup>1</sup>; <sup>1</sup>Northeastern University, Shenyang City, China;

Paper Id: 58

**12:10 AM.:** [PhysicsWedAM.05]

**Thermodynamic of Nanoscale Y2Ti2O7**

W. Gong <sup>1</sup>; <sup>1</sup>Huizhou University, Huizhou, China;

Paper Id: 221

**12:50 PM LUNCH**

**SESSION:PhysicsWedPM1**      **2nd Intl. Symp. on Physics of Surfaces and Interfaces, from Fundamentals to Sustainable Applications**

Wed Nov, 09 2016

Room: **HERB I**

Session Chairs: Tingting Zhao; Student Monitor: TBA

**02:00 PM1:** [PhysicsWedPM106]

**Porous Oxide Films Formed On Titanium Alloys By Electrochemical Methods To Improve The Corrosion And Tribocorrosion Behavior In Specific Environments**

L. Benea <sup>1</sup>; E. Danaila <sup>1</sup>; <sup>1</sup>Dunarea de Jos University of Galati, Galati, Romania;

Paper Id: 240

**02:25 PM1:** [PhysicsWedPM107]

**Mechanism Exploration Of Wrinkles Around The Hole In An Annular Thin Plate In Tension**

G. Yulong <sup>1</sup>; J. Liu <sup>2</sup>; <sup>1</sup>, Qingdao, China; <sup>2</sup>China University of Petroleum (East China), Qingdao, China;

Paper Id: 275

**02:50 PM1:** [PhysicsWedPM108]

**Droplet Deformation With Interfacial Nanoparticle Jamming**

X. Li <sup>1</sup>; <sup>1</sup>, Xi'an, China;

Paper Id: 307

**03:15 PM1:** [PhysicsWedPM109]

**Facile fabrication of Hydrophobic Octadecylamine-Functionalized Polyurethane Foam for Oil Spill Cleanup**

H. Liu <sup>1</sup>; <sup>1</sup>59 Qinglong Road, Mianyang,Sichuan, P.R.China 621010, Mian yang,

China;  
Paper Id: 329

**03:40 AM Break**

**08:30 AM - 10:30 PM SUMMIT PLENARY**

**10:30 AM Break**

SESSION:**MathematicsWedAM.**

**Santilli International Symposium (Intl. Symp.  
on Sustainable Mathematics Applications)**

Wed Nov, 09 2016

Room: **Salon II**

Session Chairs: Ruggero **Santilli**; Student Monitor: TBA

**10:55 AM.:** [MathematicsWedAM.02] Plenary

**Sustainable Incubation of Centrally Symmetric Periodic System of the Elements**

**E. Trell**<sup>1</sup>; <sup>1</sup>Linköping University, Linköping, Sweden;

Paper Id: 291

**11:20 AM.:** [MathematicsWedAM.03] Plenary

**Anthropology of Hadronic Science and Technology – Addressing the  
Significance of External Cultural Factors for Promotion vs. Obstruction of  
Sustainable Industrial Processing at a Global Scale**

**S. Johansen**<sup>1</sup>; <sup>1</sup>Norwegian University of Science and Technology / Institute of Basic  
Research, USA, Trondheim, Norway;

Paper Id: 289

**11:45 AM.:** [MathematicsWedAM.04] Plenary

**Results of ICLATIP – 3, Nepal, 2011**

**B. Tuladhar**<sup>1</sup>; <sup>1</sup>Kathmandu University, Kavre, Nepal;

Paper Id: 425

SESSION:**MathematicsWedPM1**

**Santilli International Symposium (Intl. Symp.  
on Sustainable Mathematics Applications)**

Wed Nov, 09 2016

Room: **Salon II**

Session Chairs: Anil **Bhalekar**; Student Monitor: TBA

**02:00 PM1:** [MathematicsWedPM106]

**Study of Combustion of Coal with Magnegas as Additive for Improved  
Combustion Efficiency: A Review of Present Scenario and Future Scope**

**S. Wazalwar**<sup>1</sup>; V. Tangde<sup>2</sup>; A. Bhalekar<sup>3</sup>; <sup>1</sup>RAJIV GANDHI COLLEGE OF  
ENGINEERING, RESEARCH & TECHNOLOGY, CHANDRAPUR, CHANDRAPUR,  
India; <sup>2</sup>Department of Chemistry, RTM Nagpur University, Nagpur, Nagpur, India; <sup>3</sup>R.  
T. M. Nagpur University,, Nagpur, India;

Paper Id: 233

**02:25 PM1:** [MathematicsWedPM107]

**Santilli's New Clean Fuels with Magnecular Structure**

**C. Pandhurnekar**<sup>1</sup>; <sup>1</sup>Department of Applied Chemistry, SHRI Ramdeobaba College of Engineering and Management, Nagpur, Nagpur, India;  
Paper Id: 234

**02:50 PM1:** [MathematicsWedPM108]

**Creating New Algebraic Hyperstructures From Santilli's Iso & Geno-Theories**

**T. Vougiouklis**<sup>1</sup>; <sup>1</sup>Democritus University of Thrace, Xanthi, Greece;  
Paper Id: 522

**08:30 AM - 10:30 PM** [SUMMIT PLENARY](#)

**10:30 AM** Break

**Yang International Symposium (3rd Intl. Symp.  
on Multiscale Material Mechanics and  
Multiphysics and Sustainable Applications)**

SESSION: **MultiscaleWedAM.**

Wed Nov, 09 2016

Room: **Salon I/V**

Session Chairs: Xiaoyan Li; Student Monitor: TBA

**10:55 AM.:** [MultiscaleWedAM.02] Keynote

[*Applied Mathematics*] **Asymptotic Solutions For Some Phase-Transition Problems**  
**H. Dai**<sup>1</sup>; <sup>1</sup>City Univ. of Hong Kong, Kowloon Tong, Hong Kong (Special Administrative Region of China);  
Paper Id: 365

**11:20 AM.:** [MultiscaleWedAM.03]

[*Defects on solids*] **A New Model for Piezoelectric Material with Void Surface Effect**  
**K. Xu**<sup>1</sup>; Y. Yue<sup>2</sup>; <sup>1</sup>Shanghai University, Shanghai, China; <sup>2</sup>Shanghai University, Shanghai, China;  
Paper Id: 80

**11:45 AM.:** [MultiscaleWedAM.04]

**Study On Thaw Consolidation Of Permafrost Under Roadway Embankment**

**J. Qi**<sup>1</sup>; X. Yao<sup>2</sup>; <sup>1</sup>Beijing University of Civil Engineering and Architecture, Beijing, China; <sup>2</sup>Cold and Arid Regions Environmental and Engineering Research Institute, Lanzhou, China;  
Paper Id: 477

**12:10 AM.:** [MultiscaleWedAM.05]

[*Coupled Continuum Mechanics*] **Phase Field Simulations On Domain Switching-Induced Toughening In Ferromagnetic Materials**

**J. Wang**<sup>1</sup>; <sup>1</sup>Zhejiang University, Hangzhou, China;  
Paper Id: 408

**12:50 PM LUNCH**

Yang International Symposium (3rd Intl. Symp.  
on Multiscale Material Mechanics and  
Multiphysics and Sustainable Applications)

SESSION: **MultiscaleWedPM1**

Wed Nov, 09 2016

Room: **Salon I/V**

Session Chairs: Tiefeng Li; Student Monitor: TBA

**02:00 PM1:** [MultiscaleWedPM106]

**Stability Capacity Of Industrialized Prefabricated High Rise Steel Structure.**

**Z. Ailin**<sup>1</sup>; <sup>1</sup>Beijing University of Civil Engineering and Architecture, Beijing, China;  
Paper Id: 476

**02:25 PM1:** [MultiscaleWedPM107]

**Mechanics of Soft Materials and Structures**

**S. Qu**<sup>1</sup>; <sup>1</sup>Zhejiang University, Hangzhou, China;  
Paper Id: 399

**02:50 PM1:** [MultiscaleWedPM108]

**Analysis Of Stress Singularities In Thin-Films Bonded To A Graded Substrate**

**P. Chen**<sup>1</sup>; J. Peng<sup>2</sup>; <sup>1</sup>Xuzhou, China; <sup>2</sup>CUMT, Xuzhou, China;  
Paper Id: 310

**03:15 PM1:** [MultiscaleWedPM109]

*[Size effects in plasticity: from Small to Meso Scale]* **Co-Deformation Mechanisms In Crystalline-Amorphous Nanolaminates**

**X. Li**<sup>1</sup>; <sup>1</sup>Beijing, China;  
Paper Id: 444

**03:40 AM** Break

Yang International Symposium (3rd Intl. Symp.  
on Multiscale Material Mechanics and  
Multiphysics and Sustainable Applications)

SESSION: **MultiscaleWedPM2**

Wed Nov, 09 2016

Room: **Salon I/V**

Session Chairs: Hongtao Wang; Student Monitor: TBA

**04:05 PM2:** [MultiscaleWedPM210]

*[Size effects in plasticity: from Small to Meso Scale]* **Dislocation Activities at the Martensite Phase Transformation Interface in Metastable Austenitic Stainless Steel: An In-situ TEM Study**



**H. Wang**<sup>1</sup>; <sup>1</sup>Zhejiang University, Hangzhou, China;  
Paper Id: 474

**04:30 PM2:** [MultiscaleWedPM211]

**Absorption Layer Removed UV Flip Chip structures for high power 365 nm UV LED**

C. Kim<sup>1</sup>; **S. Yu**<sup>2</sup>; <sup>1</sup>KISTI, Seoul, Korea (Republic of [South] Korea); <sup>2</sup>Sunmoon University, Asan-si, Korea (Republic of [South] Korea);  
Paper Id: 194

**04:55 PM2:** [MultiscaleWedPM212]

**Numerical Simulations Of Propagation And Coalescence Of Cracks In Rocks Under Thermo-Seepage-Mechanical Coupling Condition In In The Framework Of General Particle Dynamics**

**Z. Xiaoping**<sup>1</sup>; <sup>1</sup>Chongqing University, Chongqing, China;  
Paper Id: 508

**08:30 AM - 10:30 PM** [SUMMIT PLENARY](#)

**10:30 AM** Break

SESSION: **MiningWedAM. 3rd Intl. Symp. on Sustainable Mining Operations**

Wed Nov, 09 2016

Room: **JASMINE**

Session Chairs: TBA Student Monitor: TBA

**10:55 AM.:** [MiningWedAM.02]

**Influences of Additions of the Slag from Base Metals Smelting on Strengths of Cemented Paste Backfill of Mill Tailings**

**Q. Yang**<sup>1</sup>; Q. Jia<sup>2</sup>; L. Guo<sup>3</sup>; S. Knutsson<sup>4</sup>; P. Xue<sup>5</sup>; G. Liu<sup>6</sup>; L. Jiang<sup>6</sup>; <sup>1</sup>Division of Minerals and Metallurgical Engineering (MiMeR), Lulea, Sweden; <sup>2</sup>Luleå University of Technology, LULEÅ, Sweden; <sup>3</sup>Beijing General Research Institute of Mining & Metallurgy, Beijing, China; <sup>4</sup>Luleå University of Technology, Luleå, Sweden; <sup>5</sup>University of Science and Technology Beijing, Beijing, China; <sup>6</sup>Beifang University of Nationalities, Yinchuan, China;  
Paper Id: 161

**11:20 AM.:** [MiningWedAM.03]

**Combination Of Minerals Transportation With Their Enrichment In Underground Conditions As A Way Of Solving Environmental Problems Of Mining**

**A. Brodt**<sup>1</sup>; <sup>1</sup>S.G.B.D. Technologies Ltd, Tel Aviv, Israel;  
Paper Id: 193

**11:45 AM.:** [MiningWedAM.04]

**Analysis the NOX Emission Reduction Cost of Cement Production in China by using the Marginal Cost Function**

**X. Li**<sup>1</sup>; <sup>1</sup>, Beijing, China;  
Paper Id: 78

**12:10 AM.:** [MiningWedAM.05]

## In-line Analyses of Geology and Process Parameters for Mine and Processing Plant Integration

E. Hill <sup>1</sup>; B. Tordoff <sup>1</sup>; <sup>1</sup>Zeiss, Cambridge, United Kingdom (Great Britain);  
Paper Id: 418

12:50 PM LUNCH

08:30 AM - 10:30 PM [SUMMIT PLENARY](#)

10:30 AM Break

SESSION: **RecyclingWedAM.**

**4th Intl. Symp. on Sustainable Materials  
Recycling Processes and Products**

Wed Nov, 09 2016

Room: **HERB II**

Session Chairs: Francesca **Pagnanelli**; Student Monitor: Jinlin **Cai**;

**10:55 AM.:** [RecyclingWedAM.02]

*[Solid and liquid wastes from industrial processes: Innovations in material recovery and environmental protection]***Dissolution Thermodynamics Analysis of CaSiO<sub>3</sub> in the System of CaSiO<sub>3</sub>-NH<sub>3</sub>-NH<sub>4</sub>Cl-H<sub>2</sub>O**

**Z. Tong** <sup>1</sup>; G. Ma <sup>2</sup>; F. Li <sup>3</sup>; X. Zhang <sup>4</sup>; Z. Xue <sup>4</sup>; <sup>1</sup>Key Laboratory for Ferrous Metallurgy and Resources Utilization of Ministry of Education, Wuhan University of Science and Technology, P.R. China, 430081, Wuhan, China; <sup>2</sup>Key Laboratory for Ferrous Metallurgy and Resources Utilization of Ministry of Education, Wuhan University of Science and Technology, Wuhan 430081, China; <sup>3</sup>The State Key Laboratory of Refractories and Met, Wuhan, China; <sup>4</sup>Key Laboratory for Ferrous Metallurgy and Resources Utilization of Ministry of Education, Wuhan University of Science and Technology, Wuhan, China; <sup>4</sup>The State Key Laboratory of Refractories and Metallurgy, Wuhan University of Science and Technology, Wuhan, China;  
Paper Id: 47

**11:20 AM.:** [RecyclingWedAM.03] Keynote

*[Solid and liquid wastes from industrial processes: Innovations in material recovery and environmental protection]***Strategies For Recycling And Valorization Of New Technology For Energy Components: The Case Of Batteries, Fuel Cells, PV Cells, Permanent Magnets**

**E. Bouyer** <sup>1</sup>; <sup>1</sup>CEA, Grenoble, France;  
Paper Id: 70

**11:45 AM.:** [RecyclingWedAM.04]

*[Solid and liquid wastes from industrial processes: Innovations in material recovery and environmental protection]***Turning Wastes Into Nanoproducts: A Hydrometallurgical Approach For Recycling End Of Life Lithium Ion Batteries**

T. Abo Atia <sup>1</sup>; **E. Moscardini** <sup>2</sup>; L. Toro <sup>1</sup>; F. Pagnanelli <sup>3</sup>; <sup>1</sup>Sapienza University, Rome, Italy; <sup>2</sup>Universita , Roma, Italy; <sup>3</sup>Sapienza University of Rome, Rome, Italy;  
Paper Id: 478

**12:10 AM.:** [RecyclingWedAM.05]

**Preparation Of Novel Ceramics Produced From Red Mud**

P. Dejian <sup>1</sup>; L. Yu <sup>1</sup>; Z. Lingling <sup>1</sup>; C. Da Qiang <sup>1</sup>; <sup>1</sup>, Beijing, China;  
Paper Id: 277

## 12:50 PM LUNCH

SESSION: **RecyclingWedPM1**

**4th Intl. Symp. on Sustainable Materials  
Recycling Processes and Products**

Wed Nov, 09 2016

Room: **HERB II**

Session Chairs: ZhiBo Tong; Feng Li; Student Monitor: TBA

**02:00 PM1:** [RecyclingWedPM106]

[*Solid and liquid wastes from industrial processes: Innovations in material recovery and environmental protection*]**Kinetic Study Of Ni(II) Ion Removal From Synthetic Wastewater By Ion Flotation**

M. Safari <sup>1</sup>; <sup>1</sup>University of Cape Town, Cape Town, South Africa (zuid Afrika);

Paper Id: 128

**02:25 PM1:** [RecyclingWedPM107]

[*Solid and liquid wastes from industrial processes: Innovations in material recovery and environmental protection*]**Copper recovery from Ausmelt slags by flotation and Industrial Application**

Q. Qin <sup>1</sup>; <sup>1</sup>School of Materials and Metallurgy, Wuhan University of Science and Technology, Wuhan, China;

Paper Id: 176

**02:50 PM1:** [RecyclingWedPM108]

[*Solid and liquid wastes from industrial processes: Innovations in material recovery and environmental protection*]**Development Of An Optimized Process For Recovery And Reuse Of Spent Membranes For Hydrogen Separation**

F. Pagnanelli <sup>1</sup>; E. Palo <sup>2</sup>; E. Moscardini <sup>3</sup>; L. Baldassari <sup>4</sup>; A. Salladini <sup>5</sup>; G. Iaquaniello <sup>6</sup>; L. Toro <sup>7</sup>; <sup>1</sup>Sapienza University of Rome, Rome, Italy; <sup>2</sup>KT - Kinetics Technology S.p.A., Roma, Italy; <sup>3</sup>Universita , Roma, Italy; <sup>4</sup>Eco Recycling, spin off Sapienza University, Civita Castellana, Italy; <sup>5</sup>Processi Innovativi s.r.l., Roma, Italy; <sup>6</sup>KT - Kinetics Technology S.p.A., Rome, Italy; <sup>7</sup>Sapienza University, Rome, Italy;

Paper Id: 333

**03:15 PM1:** [RecyclingWedPM109]

**Experimental Research On Leaching Valuable Metals From Waste Diamond Cutters With Ammonia-Ammonium Sulfate System**

P. Xue <sup>1</sup>; L. Guangqiang <sup>2</sup>; Q. Qingwei <sup>2</sup>; <sup>1</sup>Wuhan University of Science and technology, Wuhan, China; <sup>2</sup>Wuhan University of Science and technology, wuhan, China;

Paper Id: 72

## 03:40 AM Break

SESSION: **RecyclingWedPM2**

**4th Intl. Symp. on Sustainable Materials  
Recycling Processes and Products**

Wed Nov, 09 2016

Room: **HERB II**

Session Chairs: Pei **Dejian**; Student Monitor: TBA

**04:05 PM2:** [RecyclingWedPM210]

*[Solid and liquid wastes from industrial processes: Innovations in material recovery and environmental protection]* **Efficient Recovery Of Copper From A Copper Converter Dust Via Thin Layer Leaching And Solvent Extraction.**

F. Alguacil <sup>1</sup> ; **F. Pagnanelli** <sup>2</sup> ; <sup>1</sup>CENIM-CSIC, Madrid, Spain; <sup>2</sup>Sapienza University of Rome, Rome, Italy;

Paper Id: 119

**04:30 PM2:** [RecyclingWedPM211]

**Recovery Of Iron Oxides By Oxidation Of Molten Steelmaking Slag In Water Vapour**

**J. Li** <sup>1</sup> ; <sup>1</sup>University of Warwick, Coventry, United Kingdom (Great Britain);

Paper Id: 403

**04:55 PM2:** [RecyclingWedPM212]

**Recycling of Iron and steel waste in Tunnel Kiln Direct Reduction of Iron Process**  
**N. Toloue Farrokh** <sup>1</sup> ; <sup>1</sup>Oulu, Oulu, Finland;

Paper Id: 461

## Thursday:

08:30 AM - 10:30 PM [SUMMIT PLENARY](#)

10:30 AM Break

SESSION: **MathematicsThuAM.** **Santilli International Symposium (Intl. Symp. on Sustainable Mathematics Applications)**

Thu Nov, 10 2016

Room: **Salon II**

Session Chairs: Thomas **Vougiouklis**; Student Monitor: TBA

**10:55 AM.:** [MathematicsThuAM.02]

**Santilli Magnegas and their Applications**

**S. Zodape**<sup>1</sup>; <sup>1</sup>, Nagpur, India;

Paper Id: 308

**11:20 AM.:** [MathematicsThuAM.03]

**Santilli's Non-nuclear and Nuclear Energies : A Source for Sustainable and Green Energy**

**I. Das Sarma**<sup>1</sup>; <sup>1</sup>Department of Applied Chemistry, Jhulelal Institute of Technology, Nagpur, India;

Paper Id: 273

**11:45 AM.:** [MathematicsThuAM.04]

**Santilli's Isomathematics for Interior Dynamic Systems**

**R. Kohale**<sup>1</sup>; <sup>1</sup>Sant Gadge Maharaj mahavidyalaya, Nagpur, India;

Paper Id: 311

SESSION: **MathematicsThuPM1**

**Santilli International Symposium (Intl. Symp. on Sustainable Mathematics Applications)**

Thu Nov, 10 2016

Room: **Salon II**

Session Chairs: Svetlin **Georgiev**; Student Monitor: TBA

**02:00 PM1:** [MathematicsThuPM106]

**Detection Of Rak Antimatter Galaxy In The Capella Region Of The Night Sky**

**R. Santilli**<sup>1</sup>; <sup>1</sup>CEO and Chief Scientist of Thunder Energies Corporation, Palm Harbor, United States;

Paper Id: 507

**02:25 PM1:** [MathematicsThuPM107]

**Antimatter Galaxies and Their Apparent Role in the Stability of the Universe**

**S. Beghella Bartoli**<sup>1</sup>; **R. Santilli**<sup>2</sup>; <sup>1</sup>Thunder Energies Corporation, Montelupone, Italy; <sup>2</sup>CEO and Chief Scientist of Thunder Energies Corporation, Palm Harbor, United States;

Paper Id: 284

**02:50 PM1:** [MathematicsThuPM108]

## **Santilli Isodual Theory Of Antimatter**

**P. Bhujbal**<sup>1</sup>; <sup>1</sup>Nutan Adarsh Arts, Commerce and Smt. Maniben Harilal Wegad Science College, Umrer, India;  
Paper Id: 231

SESSION: **MathematicsThuPM2**

**Santilli International Symposium (Intl. Symp. on Sustainable Mathematics Applications)**

Thu Nov, 10 2016

Room: **Salon II**

Session Chairs: Ruggero **Santilli**; Student Monitor: TBA

**04:05 PM2:** [MathematicsThuPM210]

**Extended version of Physics in the Large Hadron Collider era and beyond**

**J. Rak**<sup>1</sup>; <sup>1</sup>, Jyväskylä, Finland;

Paper Id: 510

**04:30 PM2:** [MathematicsThuPM211]

**Antimatter Asteroids and Their Possible Trajectories in Our Solar System**

**S. Beghella Bartoli**<sup>1</sup>; <sup>1</sup>Thunder Energies Corporation, Montelupone, Italy;

Paper Id: 283

**04:55 PM2:** [MathematicsThuPM212]

**Introduction to Iso-Tensor Calculus and Continuum Mechanics**

**P. Muktibodh**<sup>1</sup>; <sup>1</sup>, Nagpur, India;

Paper Id: 322

## Posters:

SESSION:MultiscalePoster	<b>Yang International Symposium (3rd Intl. Symp. on Multiscale Material Mechanics and Multiphysics and Sustainable Applications)</b>
	Room: HallWay
Poster Session	07-10 Nov, 2016

### [MultiscalePoster1] **Analysis of the flow and heat transfer for fluid-thermal acupuncture needle**

Z. Stephen <sup>1</sup>; <sup>1</sup>, NANJING, China;

SESSION:IronPoster	<b>D'Abreu International Symposium (4th Intl. Symp. on Advanced Sustainable Iron and Steel Making)</b>
	Room: HallWay
Poster Session	07-10 Nov, 2016

### [IronPoster1] **Research on iron ore sintering with oxygen enrichment**

F. Han <sup>1</sup>; H. Long <sup>2</sup>; <sup>1</sup>Baosteel Group, Nanjing, China; <sup>2</sup>Anhui University of Science and Technology, Maanshan, China;

### [IronPoster2] **Heat Transfer Property of Gas Jet Cooling in Confined Nozzle**

W. Chengbo <sup>1</sup>; J. Zhang <sup>2</sup>; Y. Jin <sup>3</sup>; <sup>1</sup>Chongqing University, Chongqing, China; <sup>2</sup>Guangxi Alnan Aluminium Fabrication Co., Ltd, chongqing, China; <sup>3</sup>WISDRI(Wuhan)WIS Industrial Furnace Co., Ltd, wuhan, China;

### [IronPoster3] **Study on the Physico-chemical Properties and Microstructure of Lime Rapidly Calcined at High Temperature**

J. Cai <sup>1</sup>; Z. Xue <sup>2</sup>; <sup>1</sup>Wuhan University of Science and Technology, Wuhan, China; <sup>2</sup>The State Key Laboratory of Refractories and Metallurgy, Wuhan University of Science and Technology, WuHan, China;

### [IronPoster4] **The Performance Comparison Of Oxidation Resistance Between Powdery And Blocky Carbon Brick Used In Blast Furnace Hearth**

L. Fujun <sup>1</sup>; N. Xiaojun <sup>1</sup>; J. Zhang <sup>2</sup>; K. Jiao <sup>1</sup>; L. Yanxiang <sup>1</sup>; Z. Yongan <sup>3</sup>; <sup>1</sup>University of Science and Technology Beijing, Beijing, China; <sup>2</sup>school of Metallurgical and Ecological Engineering, University of Science and Technology Beijing, Beijing, China; <sup>3</sup>Henan Winna Industrial Group Co.,Ltd., Gongyi, China;

### [IronPoster5] **Characteristics and origins of oxide inclusions in bearing steel used for high-power wind turbines during different process**

Y. Li <sup>1</sup>; Z. Xue <sup>2</sup>; Y. Li <sup>1</sup>; <sup>1</sup>Wuhan University of Science and Technology, Wuhan, China; <sup>2</sup>The State Key Laboratory of Refractories and Metallurgy, Wuhan University of Science and Technology, WuHan, China;

### [IronPoster6] **Wear Mechanism Research on Hearth Refractory of Xianggang NO.1**

## **Blast Furnace**

L. Fujun<sup>1</sup>; N. Xiaojun<sup>1</sup>; J. Zhang<sup>1</sup>; K. Jiao<sup>1</sup>; Y. Jiang<sup>2</sup>; J. Dan<sup>2</sup>; <sup>1</sup>University of Science and Technology Beijing, Beijing, China; <sup>2</sup>Hunan Valin Xiangtan Iron and Steel Co.,Ltd, Xiangtan, China;

### **[IronPoster7] Study on concentrating behavior of vanadium in V-bearing steelmaking slag modified under reduction atmosphere**

L. Wu<sup>1</sup>; J. Wang<sup>2</sup>; Y. Dong<sup>2</sup>; <sup>1</sup>, Ma'anshan, China; <sup>2</sup>Anhui University of Technology, Ma'anshan, China;

### **[IronPoster8] Study on self-pulverization of converter steel slag**

J. Wang<sup>1</sup>; L. Wu<sup>2</sup>; Y. Dong<sup>1</sup>; <sup>1</sup>Anhui University of Technology, Ma'anshan, China; <sup>2</sup>, Ma'anshan, China;

### **[IronPoster9] Study on equiaxed crystallization behavior in solidification of 40Cr steel strand**

C. Cheng<sup>1</sup>; <sup>1</sup>, wuhan, China;

### **[IronPoster10] Modeling the simultaneous acid leaching process of phosphorus and aluminum remotion in iron ore**

J. De Castro<sup>1</sup>; C. Hosken<sup>2</sup>; L. Rollim Lopes<sup>2</sup>; L. Martins Da Silva<sup>3</sup>; E. Oliveira<sup>4</sup>; A. Santos Francisco<sup>2</sup>; <sup>1</sup>UFF - Federal Fluminense University, Volta Redonda, Brazil; <sup>2</sup>UFF, Volta Redonda, Brazil; <sup>3</sup>Universidade Federal Fluminense, Volta Redonda, Brazil; <sup>4</sup>Center for Technological Education Celso Suckow da Fonseca, Valença, Brazil;

### **[IronPoster11] Calculation Of Mineral Phase And Tin Remove Region During Roasting Of Cassiterite And Sulfur-Bearing Stone Coal Using Factsage Software**

L. Lei<sup>1</sup>; R. Zhang<sup>2</sup>; J. Hu<sup>3</sup>; Y. Wei<sup>2</sup>; <sup>1</sup>, Kunmin, China; <sup>2</sup>, Kunming, China; <sup>3</sup>, kunming, China;

### **[IronPoster12] Modification of molten steel slag for cement manufacturing**

J. Ferreira Neto<sup>1</sup>; T. Ribeiro<sup>1</sup>; F. Chotoli<sup>1</sup>; V. Quarcioni<sup>1</sup>; J. Faria<sup>1</sup>; C. Fredericci<sup>1</sup>; <sup>1</sup>Institute for Technological Research, Sao Paulo, Brazil;

SESSION:MetalsPoster **Yagi International Symposium (2nd Intl. Symp. on Sustainable Metals & Alloys Processing)**

Room: HallWay

Poster Session 07-10 Nov, 2016

### **[MetalsPoster1] Comparison of Hydrogen Stogage Properties of Mg2Al3 Alloys Prepared By Combustion Synthesis and Induction Melting**

Y. Zhu<sup>1</sup>; Y. Zhou<sup>1</sup>; Y. Zhu<sup>1</sup>; L. Li<sup>1</sup>; <sup>1</sup>Nanjing Tech University, Nanjing, China;

### **[MetalsPoster2] Reduction behavior and crushing strength of carbon-containing composites prepared from a limonite-based pellet and COG tar**

Y. Mochizuki<sup>1</sup>; M. Nishio<sup>1</sup>; N. Tsubouchi<sup>1</sup>; T. Akiyama<sup>1</sup>; <sup>1</sup>Hokkaido University, Sapporo, Japan;



**[MetalsPoster3] Research on sintering characteristics of titanium sands after grinding and its influence mechanism on the quality of sinter**

Y. Zhang <sup>1</sup>; J. Zhang <sup>2</sup>; Z. Wang <sup>3</sup>; Z. Liu <sup>4</sup>; X. Liu <sup>4</sup>; <sup>1</sup>, Beijing, China; <sup>2</sup>school of Metallurgical and Ecological Engineering, University of Science and Technology Beijing, Beijing, China; <sup>3</sup>School of Metallurgical and Ecological Engineering, University of Science and Technology Beijing, Beijing, China; <sup>4</sup>school of Metallurgical and Ecological Engineering, University of Science and Technology Beijing, Beijing, China;

**[MetalsPoster4] The removal of arsenic and sulfur from low arsenic-bearing iron ore by roasting method**

R. Cheng <sup>1</sup>; H. Ni <sup>1</sup>; H. Zhang <sup>1</sup>; Y. Yang <sup>1</sup>; <sup>1</sup>Wuhan University of Science and Technology, Wuhan, China;

**[MetalsPoster5] Numerical Evaluation Of The Effects Of Soft-Melting Properties On The Kinetic Calcium Ferrites Formation In The Compact Sintering Machine**

J. De Castro <sup>1</sup>; A. Lopes <sup>2</sup>; F. De Medeiros <sup>3</sup>; A. Santos Francisco <sup>3</sup>; F. Vitoretti <sup>1</sup>; M. De Campos <sup>1</sup>; <sup>1</sup>UFF - Federal Fluminense University, Volta Redonda, Brazil; <sup>2</sup>UFF/CSN, Volta Redonda, Brazil; <sup>3</sup>UFF, Volta Redonda, Brazil;

**[MetalsPoster6] Development of mathematical model based on multiphase theory for Neodymium oxide Reduction in the electrowinning cells**

J. De Castro <sup>1</sup>; M. De Campos <sup>1</sup>; J. Yagi <sup>2</sup>; <sup>1</sup>UFF - Federal Fluminense University, Volta Redonda, Brazil; <sup>2</sup>Tohoku University, Sendai, Japan;

**[MetalsPoster7] Modeling The Induration Phenomena On The Iron Ore Pellets Furnace With Inner Solid Fuel**

J. De Castro <sup>1</sup>; F. Vitoretti <sup>1</sup>; M. De Campos <sup>1</sup>; A. Santos Francisco <sup>2</sup>; C. Hosken <sup>2</sup>; <sup>1</sup>UFF - Federal Fluminense University, Volta Redonda, Brazil; <sup>2</sup>UFF, Volta Redonda, Brazil;

**[MetalsPoster8] Influence of hereditary structure on the Glass-forming ability and mechanical properties of a Zr52.8Cu29.1Ni7.3Al9.8Y1 bulk metallic glass**

S. Lu <sup>1</sup>; S. Sun <sup>1</sup>; X. Huang <sup>1</sup>; X. Zhu <sup>2</sup>; <sup>1</sup>Northeastern University, Shenyang, China; <sup>2</sup>northeastern university, Shenyang, China;

SESSION:MetallcPoster

**Dubois International Symposium (Intl Symp. on Sustainable Complex Metallic Systems)**

Room: HallWay

Poster Session

07-10 Nov, 2016

**[MetallicPoster1] Barrierless Cu alloy Thin Films on Silicon with High Thermal Stability and Low Electrical Resistivity**

X. Li <sup>1</sup>; <sup>1</sup>Dalian University of Technology, Dalian, China;

SESSION:AluminumPoster **Øye International Symposium (Intl Symp. on Sustainable Ionic Liquid and Aluminum Extraction and Processing)**  
Room: HallWay  
Poster Session 07-10 Nov, 2016

[AluminumPoster1] **Preparation of ultrafine  $\gamma$ -Al<sub>2</sub>O<sub>3</sub> powder from fly ash by ammonium sulfate roasting technology**

Y. Wu <sup>1</sup>; <sup>1</sup>, Shenyang, China;

SESSION:MathematicsPoster **Santilli International Symposium (Intl. Symp. on Sustainable Mathematics Applications)**  
Room: HallWay  
Poster Session 07-10 Nov, 2016

[MathematicsPoster1] **Verification of intermediate nuclear fusions without harmful radiation and the production of magnecular clusters**

L. Ying <sup>1</sup>; <sup>1</sup>Thunder Energies, Hoboken, United States;

[MathematicsPoster2] **Numerical Simulation on the Effects of Inlet Velocity on Gas-Powder Flow in a Slot-Plug Mixing Chamber**

J. Xie <sup>1</sup>; <sup>1</sup>, Wuhan, China;

SESSION:MineralPoster **Starkey International Symposium (3rd Intl. Symp. on Sustainable Mineral Processing: Principles, Technologies and Industrial Practice)**  
Room: HallWay  
Poster Session 07-10 Nov, 2016

[MineralPoster1] **Recovery of Gold from Tailings of Al-Amar Mine in Saudi Arabia**

M. Mahmoud <sup>1</sup>; H. Awad <sup>2</sup>; <sup>1</sup>College of Science, Chemistry department, Taif, Saudi Arabia (Kingdom of Saudi Arabia);<sup>2</sup>Taif University, Taif, Saudi Arabia (Kingdom of Saudi Arabia);

[MineralPoster2] **Investigations for a beneficiation route for Sishen mine's iron ore Jig slimes**

G. Molebiemang <sup>1</sup>; <sup>1</sup>Vaal University of Technology, Gauteng, South Africa (zuid Afrika);

[MineralPoster3] **studies on the oxidation behaviour of pyrite under different system**

P. Li <sup>1</sup>; X. Hui <sup>1</sup>; <sup>1</sup>China Gold Science and Technology Co.Ltd., Beijing, China;

[MineralPoster4] **The Gold Recovering Process with Ore Roasting is Successful Practiced in GuiZhou Jin Xing Gold Mining Co.Ltd**

X. Hui <sup>1</sup>; P. Li <sup>1</sup>; F. Sun <sup>1</sup>; W. Zhang <sup>2</sup>; J. Shi <sup>3</sup>; <sup>1</sup>China Gold Science and Technology Co.Ltd., Beijing, China; <sup>2</sup>Guizhou Jinxing Gold Mine Co. Ltd., Xingren, China; <sup>3</sup>Guizhou Jinxing Gold Mine Co. Ltd., Xingren, China;

SESSION:Non-ferrousPoster

**4th Intl. Symp. on Sustainable Non-ferrous Smelting and Hydro/Electrochemical Processing**

Room: HallWay

Poster Session

07-10 Nov, 2016

[Non-ferrousPoster1] **Recovery of iron and silicon from Copper smelting tailings**

J. Chen <sup>1</sup>; Q. Wang <sup>1</sup>; Q. Tian <sup>1</sup>; X. Guo <sup>1</sup>; <sup>1</sup>Central South University, Changsha, China;

[Non-ferrousPoster2] **Reductive alkali-fusion of silver separated residue derived from copper anode slime**

D. Li <sup>1</sup>; X. Guo <sup>1</sup>; Q. Tian <sup>1</sup>; J. Zhang <sup>1</sup>; Z. Xu <sup>1</sup>; R. Xu <sup>1</sup>; <sup>1</sup>Central South University, Changsha, China;

[Non-ferrousPoster3] **Research on the Multiphase Equilibrium Modeling in the Oxygen Bottom Blowing Copper Smelting (SKS) Process**

L. Liao <sup>1</sup>; Q. Wang <sup>2</sup>; Q. Tian <sup>2</sup>; X. Guo <sup>2</sup>; <sup>1</sup>, Changsha, China; <sup>2</sup>Central South University, Changsha, China;

[Non-ferrousPoster4] **Simulation of gas phase motion in oxygen bottom blown copper smelting process**

S. Yan <sup>1</sup>; Q. Wang <sup>2</sup>; Q. Tian <sup>2</sup>; X. Guo <sup>2</sup>; <sup>1</sup>Central South University, hunan changsha, China; <sup>2</sup>Central South University, Changsha, China;

[Non-ferrousPoster5] **Recovery of Vanadium and Chromium from Residue**

H. Peng <sup>1</sup>; Z. Liu <sup>2</sup>; C. Tao <sup>2</sup>; <sup>1</sup>, chongqing, China; <sup>2</sup>Chongqing University, chongqing, China;

[Non-ferrousPoster6] **Phosphorus removal from high-phosphorus rhodochrosite acidic leach solution**

X. Zhang <sup>1</sup>; Z. Liu <sup>2</sup>; Z. Xie <sup>3</sup>; C. Tao <sup>2</sup>; <sup>1</sup>, Chongqing, China; <sup>2</sup>Chongqing University, chongqing, China; <sup>3</sup>Chongqing University, Chongqing, China;

[Non-ferrousPoster7] **Experimental and Numerical Investigation of profiled anode in manganese electrowinning**

R. Liu <sup>1</sup>; L. Guo <sup>1</sup>; Z. Liu <sup>2</sup>; J. Shu <sup>3</sup>; X. Zhang <sup>3</sup>; Y. Zhao <sup>3</sup>; C. Tao <sup>2</sup>; <sup>1</sup>, Chongqing, China; <sup>2</sup>Chongqing University, chongqing, China; <sup>3</sup>Chongqing University, Chongqing, China;

[Non-ferrousPoster8] **A novel technology about efficient removal and resource recycling of mercury from non-ferrous smelting flue gas**

Z. Liu <sup>1</sup>; H. Liu <sup>2</sup>; L. Chai <sup>3</sup>; <sup>1</sup>, Changsha, China; <sup>2</sup>School of Metallurgy and Environment, Central South University, Changsha, China; <sup>3</sup>Central South University, Changsha, China;

[Non-ferrousPoster9] **Analyses And Characterization Of Industrial Silicon Slag On Physicochemical Properties**

F. Wang <sup>1</sup>; J. Wu <sup>1</sup>; W. Ma <sup>1</sup>; M. Xu <sup>1</sup>; <sup>1</sup>Kunming University of Science and Technology, KUNMING, China;

SESSION:CoalPoster

**Intl. Symp. World Forum on Sustainable Coal Combustion and Processing**

Room: HallWay

Poster Session

07-10 Nov, 2016

[CoalPoster1] **The Study on the Lignite coking and its Effect on Combustion Characteristics**

S. Liu <sup>1</sup>; J. Zhang <sup>2</sup>; T. Song <sup>1</sup>; <sup>1</sup>University of Science and Technology Beijing, Beijing, China; <sup>2</sup>school of Metallurgical and Ecological Engineering, University of Science and Technology Beijing, Beijing, China;

SESSION:RecyclingPoster

**4th Intl. Symp. on Sustainable Materials Recycling Processes and Products**

Room: HallWay

Poster Session

07-10 Nov, 2016

[RecyclingPoster1] **Review of Hydrothermal Sulfidation in the Treatment of Nonferrous Smelting Residue for Metal Recovery**

Y. Ke <sup>1</sup>; L. Chai <sup>1</sup>; X. Min <sup>1</sup>; H. Liu <sup>1</sup>; <sup>1</sup>School of Metallurgy and Environment, Central South University, Changsha, China;

[RecyclingPoster2] **Cascade sulfidation and separation of copper and arsenic from acidic wastewater via gas-liquid reaction**

L. Chai <sup>1</sup>; G. Jiang <sup>1</sup>; X. Min <sup>2</sup>; H. Liu <sup>2</sup>; <sup>1</sup>Central South University, Changsha, China; <sup>2</sup>School of Metallurgy and Environment, Central South University, Changsha, China;

[RecyclingPoster3] **Recovery of zinc from high iron-bearing zinc calcines by alkaline leaching and precipitation process**

N. Peng <sup>1</sup>; L. Chai <sup>1</sup>; X. Min <sup>2</sup>; H. Liu <sup>2</sup>; <sup>1</sup>Central South University, Changsha, China; <sup>2</sup>School of Metallurgy and Environment, Central South University, Changsha, China;

SESSION:EnvironmentalPoster **5th Intl. Symp. on Environmental, Health, Policy, Legal, Management and Social Issues Related to Metals, Materials and Mineral Processing**  
Room: HallWay  
Poster Session 07-10 Nov, 2016

[EnvironmentalPoster1] **Solidification/stabilization of arsenic bearing gypsum sludge using Portland cement: effect of precalcination**

X. Zhu <sup>1</sup>; <sup>1</sup>Faculty of Metallurgical and Energy Engineering, Kunming University of Science and Technology State Key Laboratory of Complex Nonferrous Metal Resources Clean Utilization, Kunming, China;

SESSION:RarePoster **3rd Intl. Symp. on Rare Earth and Platinum Group Metals: Managing and Processing**  
Room: HallWay  
Poster Session 07-10 Nov, 2016

[RarePoster1] **Mechanism of CeMgAl<sub>11</sub>O<sub>19</sub>:Tb<sup>3+</sup> structure decomposition during alkaline fusion process**

S. Zhang <sup>1</sup>; Y. Liu <sup>2</sup>; <sup>1</sup>Institute for Advanced Materials & Technology, University of Science and Technology Beijing, Beijing, China; <sup>2</sup>Institute for Advanced Materials & Technology, University of Science and Technology Beijing, Beijing, China;

SESSION:MoltenPoster **4th Intl. Symp. on Sustainable Molten Salt and Ionic Liquid Processing**  
Room: HallWay  
Poster Session 07-10 Nov, 2016

[MoltenPoster1] **Electrodeposition of titanium from an ionic liquid**

C. Qi <sup>1</sup>; Q. Wang <sup>2</sup>; Y. Kang <sup>3</sup>; X. Lu <sup>2</sup>; <sup>1</sup>a: College of Chemistry and Chemical Engineering, Shenyang Normal University b: Institute of Process Engineering, Chinese Academy of Sciences, Beijing, China; <sup>2</sup>Institute of Process Engineering, Chinese Academy of Sciences, Beijing, China; <sup>3</sup>College of Chemistry and Chemical Engineering, Shenyang Normal University, Shenyang, China;

[MoltenPoster2] **Phase diagram and electrical conductivity of NdBr<sub>3</sub> - KBr**

M. Berkani <sup>1</sup>; Y. Bounouri <sup>2</sup>; <sup>0</sup>; M. Gaune Escard <sup>3</sup>; <sup>1</sup>Université de Bejaia, Bejaia, Algeria; <sup>2</sup>Universite de Bejaia, Bejaia, Algeria; <sup>3</sup>Aix-Marseille Université/Polytech, CNRS/IUSTI UMR7343, Marseille, France;

[MoltenPoster3] **Electrical Conductivity Of Molten Cadmium Chloride At Elevated Temperatures**

A. Potapov <sup>1</sup>; A. Salyulev <sup>1</sup>; <sup>1</sup>Institute of High Temperature Electrochemistry, Ekaterinburg, Russian Federation;

[MoltenPoster4] **Electrical Conductivity Of Zrcl<sub>4</sub> And Hfcl<sub>4</sub> Solutions In Molten**

## **Alkali Metal Chlorides**

A. Potapov <sup>1</sup> ; A. Salyulev <sup>1</sup> ; <sup>1</sup>Institute of High Temperature Electrochemistry, Ekaterinburg, Russian Federation;

### **[MoltenPoster5] Electrical Conductivity Of Molten (3liCl-2kCl) - CdCl<sub>2</sub> Mixtures**

A. Potapov <sup>1</sup> ; A. Salyulev <sup>1</sup> ; V. Khokhlov <sup>1</sup> ; V. Shishkin <sup>1</sup> ; <sup>1</sup>Institute of High Temperature Electrochemistry, Ekaterinburg, Russian Federation;

### **[MoltenPoster6] Solidification As A Transition From Classical To Quantum Motion Of The Atoms Owing To Freezing Of Atomic Freedom Degrees**

A. Potapov <sup>1</sup> ; V. Pavlov <sup>2</sup> ; <sup>1</sup>Institute of High Temperature Electrochemistry, Ekaterinburg, Russian Federation; <sup>2</sup>Ural State Mining University, Ekaterinburg, Russian Federation;

### **[MoltenPoster7] Electrochemical Behaviour and Electrodeposition of Silicon onto Graphite from Halide and Halide-Oxide Melts**

D. Shakhnin <sup>1</sup> ; L. Molotovska <sup>1</sup> ; V. Malyshev <sup>2</sup> ; A. Sushchenko <sup>1</sup> ; M. Gaune Escard <sup>3</sup> ; <sup>1</sup>V.I. Vernadsky Institute of General and Inorganic Chemistry of the National Academy of Sciences of Ukraine, Kyiv, Ukraine; <sup>2</sup>IGIC NASU, Kyiv, Ukraine; <sup>3</sup>Aix-Marseille Université/Polytech, CNRS/IUSTI UMR7343, Marseille, France;

### **[MoltenPoster8] Thermodynamical Substantiation of Metallothermic and High-Temperature Electrochemical Synthesis of Chromium Silicides**

A. Gab <sup>1</sup> ; L. Molotovska <sup>2</sup> ; V. Malyshev <sup>3</sup> ; A. Sushchenko <sup>2</sup> ; M. Gaune Escard <sup>4</sup> ; <sup>1</sup>National Technical University of Ukraine, Kyiv, Ukraine; <sup>2</sup>V.I. Vernadsky Institute of General and Inorganic Chemistry of the National Academy of Sciences of Ukraine, Kyiv, Ukraine; <sup>3</sup>IGIC NASU, Kyiv, Ukraine; <sup>4</sup>Aix-Marseille Université/Polytech, CNRS/IUSTI UMR7343, Marseille, France;

### **[MoltenPoster9] Synthesis of Disperse Powders of VI-B Group Metals Silicides from Ionic Melts**

V. Malyshev <sup>1</sup> ; A. Sushchenko <sup>2</sup> ; A. Gab <sup>3</sup> ; N. Uskova <sup>1</sup> ; O. Podyman <sup>1</sup> ; M. Gaune Escard <sup>4</sup> ; <sup>1</sup>IGIC NASU, Kyiv, Ukraine; <sup>2</sup>V.I. Vernadsky Institute of General and Inorganic Chemistry of the National Academy of Sciences of Ukraine, Kyiv, Ukraine; <sup>3</sup>National Technical University of Ukraine, Kyiv, Ukraine; <sup>4</sup>Aix-Marseille Université/Polytech, CNRS/IUSTI UMR7343, Marseille, France;

### **[MoltenPoster10] Heat-Resistant CrSi<sub>2</sub>: Synthesis of Nanocrystalline Powders, Single Crystals, and Coatings from Molten Salts**

L. Molotovska <sup>1</sup> ; D. Shakhnin <sup>1</sup> ; V. Malyshev <sup>2</sup> ; A. Sushchenko <sup>1</sup> ; M. Gaune Escard <sup>3</sup> ; <sup>1</sup>V.I. Vernadsky Institute of General and Inorganic Chemistry of the National Academy of Sciences of Ukraine, Kyiv, Ukraine; <sup>2</sup>IGIC NASU, Kyiv, Ukraine; <sup>3</sup>Aix-Marseille Université/Polytech, CNRS/IUSTI UMR7343, Marseille, France;

### **[MoltenPoster11] The possibility of electrodeposition of the titanium diboride coherent coating on graphite or other solid surface from cryolite -alumina melts containing titanium and boron oxides**

S. Devyatkin <sup>1</sup> ; <sup>1</sup>Institute of General and Inorganic Chemistry, Kiev, Ukraine;

### **[MoltenPoster12] Synthesis Of Tungsten Silicide From Halogenide Oxide Ionic**

## Melts

M. Adamokova <sup>1</sup>; H. Kushkhov <sup>1</sup>; R. Mamhegova <sup>1</sup>; <sup>1</sup>Kabardino-Balkarian State University, Nalchik, Russian Federation;

### [MoltenPoster13] **Electrochemical Synthesis Of Functional Materials On The Basis Of Holmium And Iron Triad Metals**

R. Kardanova <sup>1</sup>; H. Kushkhov <sup>2</sup>; M. Margusheva <sup>3</sup>; <sup>1</sup>Kabardino-Balkarian state university of name H.M. Berbekova, city of Nalchik, Russian Federation; <sup>2</sup>Kabardino-Balkarian State University, Nalchik, Russian Federation; <sup>3</sup>Kabardino-Balkarian state university, Nalchik, Russian Federation;

### [MoltenPoster14] **The thermal decomposition of sodium carbonate and calcium carbonate in molten sodium chloride and the molten salt synthesis (MSS) of sodium silicate and calcium silicate.**

R. Sheikh <sup>1</sup>; S. Simons <sup>1</sup>; D. Brett <sup>1</sup>; M. Gaune Escard <sup>2</sup>; <sup>1</sup>University College London, London, United Kingdom (Great Britain); <sup>2</sup>AIX-MARSEILLE UNIVERSITE/POLYTECH, CNRS/IUSTI UMR7343, Marseille, France;

### [MoltenPoster15] **The production of graphene-based nanomaterials and the application of economic models.**

R. Sheikh <sup>1</sup>; G. Peters <sup>1</sup>; M. Gaune Escard <sup>2</sup>; C. Schwandt <sup>3</sup>; <sup>1</sup>University College London, London, United Kingdom (Great Britain); <sup>2</sup>AIX-MARSEILLE UNIVERSITE/POLYTECH, CNRS/IUSTI UMR7343, Marseille, France; <sup>3</sup>University of Cambridge, Cambridge, United Kingdom (Great Britain);

### [MoltenPoster16] **Structural And Morphological Peculiarities Of Electrolytical Carbon Nanopowders Produced In Molten Salts**

I. Novoselova <sup>1</sup>; S. Kuleshov <sup>1</sup>; <sup>1</sup>Institute of General and Inorganic Chemistry, Kiev, Ukraine;

### [MoltenPoster17] **Direct reduction of TiO<sub>2</sub> and ZrO<sub>2</sub> powders by Mg to produce Ti and Zr metals**

H. Nersisyan <sup>1</sup>; B. Yoo <sup>2</sup>; J. Lee <sup>3</sup>; <sup>1</sup>Graduate school of Department of Advanced Materials Engineering, Chungnam National University, Daejeon, Korea (Republic of [South] Korea); <sup>2</sup>Ph.D. student, Daejeon, Korea (Republic of [South] Korea); <sup>3</sup>Chungnam National University, Daejeon, Korea (Republic of [South] Korea);

### [MoltenPoster18] **Low temperature electroreduction of ilmenite ore in LiCl molten salt**

V. Ri <sup>1</sup>; B. Yoo <sup>2</sup>; H. Nersisyan <sup>3</sup>; J. Lee <sup>1</sup>; <sup>1</sup>Chungnam National University, Daejeon, Korea (Republic of [South] Korea); <sup>2</sup>Ph.D. student, Daejeon, Korea (Republic of [South] Korea); <sup>3</sup>Graduate school of Department of Advanced Materials Engineering, Chungnam National University, Daejeon, Korea (Republic of [South] Korea);

### [MoltenPoster19] **Modeling of electro-winning behaviors of Zr depending on electrode location**

Y. Kim <sup>1</sup>; H. Nersisyan <sup>2</sup>; Y. Lee <sup>1</sup>; S. Han <sup>3</sup>; J. Lee <sup>4</sup>; <sup>1</sup>Chung-nam National University, Daejeon, Korea (Republic of [South] Korea); <sup>2</sup>Graduate school of Department of Advanced Materials Engineering, Chungnam National University, Daejeon, Korea (Republic of [South] Korea); <sup>3</sup>, Daejeon, Korea (Republic of [South] Korea);

Korea); <sup>4</sup>Chungnam National University, Daejeon, Korea (Republic of [South] Korea);

[MoltenPoster20] **Combustion grown carbon hollow nanospheres and a few atomic layer nanosheets with improved capacitive properties**

S. Lee <sup>1</sup>; H. Nersisyan <sup>2</sup>; J. Lee <sup>1</sup>; <sup>1</sup>Chungnam National University, Daejeon, Korea (Republic of [South] Korea); <sup>2</sup>Graduate school of Department of Advanced Materials Engineering, Chungnam National University, Daejeon, Korea (Republic of [South] Korea);

[MoltenPoster21] **Application, thermodynamic, transport and structure properties of 1-alkyl-3-ethylimidazolium based ionic liquids**

S. Gadzuric <sup>1</sup>; M. Vranes <sup>1</sup>; T. Trtic Petrovic <sup>2</sup>; G. Vastag <sup>1</sup>; S. Dozic <sup>1</sup>; N. Zec <sup>3</sup>; A. Tot <sup>1</sup>; S. Papovic <sup>1</sup>; A. Dimitrijevic <sup>2</sup>; N. Zdolsek <sup>2</sup>; <sup>1</sup>Faculty of Sciences, University of Novi Sad, Novi Sad, Serbia and Montenegro (formerly Yugoslavia); <sup>2</sup>Vin&#269;a Institute of Nuclear Sciences, University of Belgrade, Belgrade, Serbia and Montenegro (formerly Yugoslavia); <sup>3</sup>Faculty of Sciences, Novi Sad, Serbia and Montenegro (formerly Yugoslavia);

SESSION:PhysicsPoster **2nd Intl. Symp. on Physics of Surfaces and Interfaces, from Fundamentals to Sustainable Applications**

Room: HallWay

Poster Session

07-10 Nov, 2016

[PhysicsPoster1] **Physical Properties of Electroformed Invar Fine Metal Mask**

Y. Park <sup>1</sup>; I. Kim <sup>2</sup>; Y. Lee <sup>2</sup>; <sup>1</sup>Sunchon National University, Suncheon, Korea (Republic of [South] Korea); <sup>2</sup>, Suncheon, Korea (Republic of [South] Korea);

SESSION:MaterialsForEnergyPoster **2nd Intl. Symp. on Advanced Materials and Technologies for Sustainable Energy and the Environment(AMTSEE)**

Room: HallWay

Poster Session

07-10 Nov, 2016

[MaterialsForEnergyPoster1] **Bifacial Quasi-solid-state Dye-sensitized Solar Cells Based on Ag<sub>2</sub>S Quantum Dots Modified Transparent Polyaniline Counter Electrode**

J. Gao <sup>1</sup>; Y. Yang <sup>1</sup>; X. Guo <sup>1</sup>; <sup>1</sup>Central South University, Changsha, China;

[MaterialsForEnergyPoster2] **Non-Ionic phosphonate Chains onto Isoindigo-Based Polymers Toward Control of Charge Dynamic for Optoelectronic Devices**

C. Yang <sup>1</sup>; <sup>1</sup>Ulsan National Institute of Science and Technology, Ulsan, Korea (Republic of [South] Korea);

[MaterialsForEnergyPoster3] **Dithienogermole-Cored Small Molecules as Donor Materials in Bulk Heterojunction Solar Cells**

C. Yang <sup>1</sup>; <sup>1</sup>Ulsan National Institute of Science and Technology, Ulsan, Korea (Republic of [South] Korea);



# Technical Program Authors Index

## A

- [Abdul, F.](#), MetalsMonPM109  
[Abo Atia, T.](#), RecyclingTuePM212, RecyclingWedAM.04  
[Adamokova, M.](#), MoltenSession(poster)  
[Adebayo, B.](#), MineralMonPM108  
[Adigun, O.](#), MineralMonPM108  
[Aifantis, K.](#), MultiscaleSession(poster)  
[Aifantis, E.](#), MultiscaleTueAM.05  
[Ailin, Z.](#), MultiscaleWedPM106  
[Aizawa, S.](#), MetalsWedAM.02  
[Akberdin, A.](#), IronWedPM106, IronWedPM107  
[Akiyama, T.](#), MetalsMonAM.04, IronTueAM.03, MetalsTueAM.03, MetalsTueAM.05, MetalsTuePM106  
[Aleksandrov, A.](#), EnergyTueAM.03  
[Aleksandrova, T.](#), MineralMonPM106  
[Alexandrova, T.](#), EnergyTueAM.03  
[Alquacil, F.](#), RecyclingWedPM210  
[Altimari, P.](#), RecyclingTuePM212  
[Amu, O.](#), MineralMonPM108  
[An, J.](#), MaterialsForEnergyMonAM.03, AluminumMonPM109, MineralMonPM210  
[Anashkina, N.](#), MineralMonPM212  
[Andrianantenaina, T.](#), EnergyTuePM106  
[Antrekowitsch, J.](#), RecyclingWedAM.02  
[Araujo, A.](#), IronTueAM.04  
[Aravind, P.](#), BatteryMonPM106  
[Arshad, M.](#), MetallicTueAM.03  
[Aryngazin, A.](#), Session(poster)  
[Aslamazasvili, Z.](#), Session(poster)  
[Assis, P.](#), MetalsMonPM108, EnergyTueAM.04, MetalsTuePM211  
[Augusto, K.](#), IronWedAM.05  
[Awad, H.](#), MineralSession(poster)

## B

- [Babenko, A.](#), IronWedPM106, IronWedPM107  
[Bai, L.](#), PhysicsWedAM.03  
[Baldassari, L.](#), RecyclingWedPM108  
[Bamber, A.](#), MineralMonPM109  
[Ban, Y.](#), AluminumMonAM.05  
[Bao, C.](#), MetallicMonPM109, CoatingsWedPM109

- [Barati, M.](#), IronMonPM212  
[Barnier, V.](#), MetallicWedPM108  
[Basu, S.](#), MaterialsForEnergyMonPM109  
[Beghella Bartoli, S.](#), MathematicsTuePM212, MathematicsThuPM107, MathematicsThuPM211  
[Benea, L.](#), MultifunctionalMaterialsTuePM210, PhysicsWedPM106  
[Bera, S.](#), MetallicTuePM106  
[Berkani, M.](#), MoltenSession(poster)  
[Berkinbayeva, A.](#), MoltenMonAM.03  
[Bertrand, E.](#), MetallicWedPM108  
[Bessada, C.](#), MoltenTueAM.03  
[Bhalekar, A.](#), MathematicsTuePM107, MathematicsTuePM211, MathematicsWedPM106  
[Bhujbal, P.](#), MathematicsThuPM108  
[Bi, X.](#), MetalsMonPM211, IronTuePM107  
[Biasutti, M.](#), MetalsMonAM.05  
[Biocanin, R.](#), MaterialsForEnergyMonAM.04  
[Bittencourt Marques, M.](#), Non-ferrousMonPM106  
[Bolfarini, C.](#), MetallicTuePM107  
[Boom, R.](#), MetalsWedPM211  
[Bouchal, R.](#), MoltenTuePM107  
[Boulet, P.](#), MetallicMonAM.03  
[Bounouri, Y.](#), MoltenSession(poster)  
[Bouyer, E.](#), RecyclingWedAM.03  
[Braems, I.](#), MetallicWedPM108  
[Braga, R.](#), MetalsTuePM210  
[Bravetti, P.](#), MetallicTuePM213  
[Breda Mourao, M.](#), MetalsTuePM210  
[Brett, D.](#), MoltenSession(poster)  
[Brocchi, E.](#), IronWedAM.02  
[Brodt, A.](#), MiningWedAM.03  
[Bunin, I.](#), MineralMonPM212  
[Burada, M.](#), AluminumTuePM108  
[Burande, C.](#), MathematicsTueAM.03, MathematicsTuePM108

## C

- [Cadars, S.](#), MoltenTueAM.03  
[Cai, J.](#), IronSession(poster)  
[Calin, M.](#), MetallicTuePM106  
[Campos De Assis, C.](#), EnergyTueAM.04  
[Cao, Y.](#), IronMonPM211  
[Cao, M.](#), MetalsMonPM212

[Cao, J.](#), Non-ferrousTuePM106  
[Capiiglia, C.](#), BatteryTueAM.04  
[Cebeci, T.](#), MineralTueAM.03  
[Chai, L.](#), RecyclingSession(posters)  
[Chai, L.](#), Non-ferrousSession(posters)  
[Chanturiya, V.](#), MineralMonPM212  
[Chaohe, X.](#), MaterialsForEnergyMonPM108  
[Chatain, D.](#), MetallicWedPM108  
[Chen, W.](#), MineralTuePM108  
[Chen, J.](#), MineralTuePM211, MoltenTuePM106  
[Chen, R.](#), BatteryMonPM107, BatteryMonPM210, BatteryTueAM.05  
[Chen, J.](#), Non-ferrousSession(posters)  
[Chen, Z.](#), MetalsTuePM212, MetalsWedPM211  
[Chen, S.](#), MultiscaleTuePM211  
[Chen, P.](#), MultiscaleWedPM108  
[Chen, J.](#), MetalsTuePM109  
[Chen, H.](#), IronMonAM.03  
[Chen, H.](#), MetalsTuePM212, MetalsWedPM211  
[Chen, G.](#), AluminumMonAM.05  
[Chen, X.](#), Non-ferrousMonAM.02  
[Cheng, P.](#), IronMonPM211  
[Cheng, C.](#), IronSession(posters)  
[Cheng, R.](#), MetalsSession(posters)  
[Chengbo, W.](#), MaterialsForEnergyMonAM.05  
[Choi, S.](#), Session(posters)  
[Choi, S.](#), MetalsWedPM106  
[Choinacka, I.](#), MoltenTueAM.04  
[Chotoli, F.](#), IronSession(posters)  
[Christien, F.](#), MetallicWedPM108  
[Chu, M.](#), MetalsMonPM213, MetalsTuePM213, MetalsWedAM.03, MetalsWedAM.05  
[Chuanyun, G.](#), MetalsWedPM213  
[Cieciwa, T.](#), CoatingsWedPM106  
[Coey, M.](#), MetallicTueAM.02, MetallicTueAM.05  
[Colin Garcia, H.](#), MathematicsTuePM213  
[Constantin, V.](#), MoltenMonPM109, AluminumTuePM108  
[Da Qiang, C.](#), RecyclingWedAM.05  
[Dai, L.](#), MultiscaleTuePM108  
[Dai, H.](#), MultiscaleWedAM.02  
[Dai, X.](#), Non-ferrousMonAM.02  
[Dan, J.](#), IronSession(posters)  
[Danaila, E.](#), PhysicsWedPM106  
[Das Sarma, I.](#), MathematicsThuAM.03  
[De Campos, M.](#), MetalsMonPM108, MetalsWedPM213  
[De Castro, J.](#), IronMonAM.04, MetalsMonPM108, IronTueAM.03, MetalsTuePM210, MetalsWedPM213  
[De Medeiros, F.](#), MetalsSession(posters)  
[De Souza, M.](#), Non-ferrousMonPM106  
[De Weerd, M.](#), MetallicMonAM.03  
[Dedyukhin, A.](#), AluminumTuePM210  
[Dehqhani, M.](#), EnergyTuePM108, EnergyWedAM.02  
[Dehqhani, F.](#), EnergyWedPM210, EnergyWedPM211, EnergyWedPM212  
[Dejian, P.](#), RecyclingWedAM.05  
[Demange, V.](#), MetallicMonAM.02  
[Demura, M.](#), MetallicMonPM107  
[Deng, N.](#), AluminumMonPM109, MineralTueAM.04  
[Deva, N.](#), Non-ferrousTuePM108  
[Devyatkin, S.](#), MoltenSession(posters)  
[Dhall, S.](#), CompositeWedPM212  
[Dhawan, N.](#), MineralTuePM106, MineralTuePM107  
[Dhoble, S.](#), Session(posters)  
[Dimitrijevic, A.](#), MoltenSession(posters)  
[Dionisio Calderon, E.](#), IronTuePM210  
[Dmitriev, A.](#), IronMonPM107, IronMonPM210  
[Donath, C.](#), MoltenMonPM109, AluminumTuePM108  
[Dong, Y.](#), IronSession(posters)  
[Dong, D.](#), MetallicMonPM213, MetallicTuePM109  
[Dong, X.](#), MetalsMonAM.05  
[Dong, C.](#), MetallicMonPM109, MetallicMonPM210, MetallicMonPM211, MetallicMonPM212, MetallicMonPM213, MetallicTuePM109  
[Dorofeev, G.](#), MetalsWedPM210

## D

[D Abreu, J.](#), IronMonPM213, IronTuePM106, IronTuePM210, IronTuePM211, IronWedAM.03  
[Dos Santos Oliveira, R.](#), EnergyTueAM.04  
[Dosymbayeva, Z.](#), MoltenMonAM.03

[Dozic, S.](#), MoltenSession(poster)  
[Drajewicz, M.](#), CoatingsWedPM106  
[Drnovsek, N.](#), MetallicTuePM211  
[Du, W.](#), MetalsWedPM108  
[Dubois, J.](#), MetallicMonAM.03,  
MetallicWedPM107, MetallicWedPM210  
[Dunin-borkowski, R.](#), MetallicMonAM.05  
[Dychton, K.](#), CoatingsWedPM106

## E

[Eckert, J.](#), MetallicMonPM106,  
MetallicTuePM106  
[Esmaili, A.](#), EnergyTuePM109,  
EnergyTuePM210, EnergyTuePM211,  
EnergyTuePM212, EnergyTuePM213,  
EnergyWedAM.03, EnergyWedAM.04,  
EnergyWedAM.05, EnergyWedPM106,  
EnergyWedPM107, EnergyWedPM108,  
EnergyWedPM109

## F

[Faidyuk, N.](#), MoltenMonPM213  
[Falcon, R.](#), Session(poster)  
[Falero, E.](#), IronTuePM211  
[Fang, F.](#), MultiscaleTuePM212  
[Fang, D.](#), MultiscaleMonPM106  
[Fang, X.](#), Session(poster)  
[Faria, J.](#), IronSession(poster)  
[Feng, X.](#), MultiscaleTueAM.04  
[Feng, X.](#), MultiscaleTuePM210  
[Feng, N.](#), AluminumMonAM.03,  
AluminumTueAM.04  
[Feng, C.](#), MetalsMonPM213,  
MetalsTuePM213, MetalsWedAM.05  
[Fengman, S.](#), MetalsMonPM212,  
MetalsWedPM212, MetalsWedPM213  
[Fernandez Diaz, G.](#), IronWedAM.04  
[Ferreira Neto, J.](#), IronSession(poster)  
[Filatov, S.](#), IronWedPM108,  
IronWedPM212  
[Fredericci, C.](#), IronSession(poster)  
  
[Fu, Y.](#), AluminumMonPM210  
[Fu, H.](#), MoltenMonPM108  
[Fujibayashi, A.](#), MetalsTueAM.02  
[Fujun, L.](#), IronSession(poster)

## G

[Gab, A.](#), MoltenSession(poster)  
[Gadzuric, S.](#), MoltenTueAM.04  
[Ganster, P.](#), MetallicWedPM108  
[Gao, X.](#), BatteryMonAM.03  
[Gao, J.](#), MaterialsForEnergySession(poster)  
[Gao, H.](#), MultiscaleMonAM.02  
[Gao, L.](#), MoltenMonAM.05  
[Gao, B.](#), AluminumMonAM.03,  
AluminumMonAM.04, AluminumMonPM1  
06, AluminumMonPM107  
[Garibashvili, V.](#), CoatingsWedPM108  
[Gaune-Escard, M.](#), AluminumTuePM108  
[Gaune-Escard, M.](#), MoltenTueAM.04  
[Georgiev, S.](#), MathematicsMonPM107,  
MathematicsMonPM210  
[Gerson Juan, C.](#), Non-  
ferrousMonPM211, Non-ferrousTueAM.03  
[Gomes, R.](#), MetallicWedPM107  
[Gomes, O.](#), IronWedAM.05  
[Gomez-marroquin, M.](#), IronMonPM213,  
IronTuePM106  
[Gong, W.](#), PhysicsWedAM.05  
[Gong, X.](#), MaterialsForEnergyMonPM210  
[Goral, M.](#), CoatingsWedPM106  
[Granata, G.](#), RecyclingTuePM210  
[Grin, Y.](#), MetallicWedAM.02,  
MetallicWedAM.03  
[Guangqiang, Z.](#), MetalsWedPM213  
[Guangqiang, L.](#), RecyclingWedPM109  
[Guedes De Lima, S.](#), MetallicWedPM107  
[Guilloux-viry, M.](#), MetallicMonAM.02  
[Guo, L.](#), Non-ferrousSession(poster)  
[Guo, W.](#), MultiscaleTueAM.03  
[Guo, X.](#), Non-ferrousMonPM109  
[Guo, L.](#), MiningWedAM.02  
[Guo, T.](#), MultiscaleMonPM109  
[Guo, W.](#), MetalsMonPM212,  
MetalsWedPM212, MetalsWedPM213  
[Guo, Z.](#), MaterialsForEnergyMonPM210  
[Guozhi, L.](#), AluminumMonPM108,  
AluminumMonPM210, AluminumMonPM2  
11, AluminumTuePM109  
[Guzzo, M.](#), Non-ferrousMonPM106

## H

[Hachiuma, H.](#), MetalsTueAM.04  
[Haihong, T.](#), EnergyTuePM107

[Haiyan, Z.](#), MetalsWedPM212,  
MetalsWedPM213  
[Hakobyan, K.](#), MineralTuePM210  
[Hakobyan, A.](#), MineralTuePM210  
[Han, J.](#), BatteryMonPM213  
[Han, S.](#), MoltenSession(poster)  
[Han, F.](#), IronSession(poster)  
[Han, H.](#), IronWedPM211  
[Hapid, A.](#), MetalsMonPM109  
[He, X.](#), BatteryMonPM212  
[He, Y.](#), MetallicTueAM.02  
[He, W.](#), AluminumMonAM.04  
[He, G.](#), MetalsWedPM213  
[He, Y.](#), MetalsWedPM109  
[He, K.](#), MetalsTuePM212,  
MetalsWedPM211  
[He, X.](#), IronMonAM.03  
[He, X.](#), MetalsTuePM212  
[Hesemann, P.](#), MoltenTuePM107  
[Higuchi, K.](#), MetalsMonPM210  
[Hill, E.](#), MiningWedAM.05  
[Hirano, A.](#), IronTuePM213  
[Hong, J.](#), MultiscaleMonPM106  
[Hong, H.](#), MetallicMonPM212  
[Honging, L.](#), MetalsWedAM.03  
[Hongjie, L.](#), AluminumTuePM107  
[Hosken, C.](#), IronMonAM.04  
[Hsia, K.](#), MultiscaleMonPM210  
[Hu, Y.](#), BatteryMonAM.05,  
BatteryMonPM109  
[Hu, Z.](#), Non-ferrousTuePM210  
[Hu, J.](#), IronSession(poster)  
[Hu, X.](#), AluminumMonPM106  
[Hu, X.](#), AluminumMonAM.03,  
AluminumMonAM.04,  
AluminumMonPM107  
[Huang, Y.](#), Session(poster)  
[Huang, X.](#), MineralTuePM211,  
MoltenTuePM106  
[Huang, J.](#), MultiscaleTuePM107  
[Huang, Y.](#), IronMonPM211  
[Huang,](#)  
L., MaterialsForEnergyMonPM211  
[Hui, X.](#), MineralTuePM213  
[Huseini, I.](#), Session(poster)

## I

[laquaniello, G.](#), RecyclingWedPM108  
[Imeri, S.](#), RotaryKilnWedAM.04

[Ishiwata, N.](#), MetalsMonAM.03  
[Iwami, Y.](#), MetalsWedPM108  
[Iwase, K.](#), MetalsWedPM108

## J

[Jehl, J.](#), MetallicTuePM212,  
MetallicWedAM.05  
[Jia, Q.](#), MiningWedAM.02  
[Jia, C.](#), Session(poster)  
[Jiang, L.](#), MiningWedAM.02  
[Jiang, G.](#), RecyclingSession(poster)  
[Jiang, H.](#), MultiscaleSession(poster)  
[Jiang, C.](#), MultiscaleSession(poster)  
[Jiang, C.](#), MetallicTueAM.02  
[Jiang, C.](#), MathematicsMonAM.04  
[Jiang, Y.](#), IronSession(poster)  
[Jiao, S.](#), BatteryTueAM.02  
[Jiao, K.](#), MetalsWedAM.05  
[Jin, Y.](#), IronSession(poster)  
[Jin, L.](#), MetallicMonPM211  
[Jing, H.](#), Non-ferrousTueAM.04  
[Jing, W.](#), MultiscaleTuePM212  
[Jinhao, Z.](#), MoltenMonPM211  
[Johansen, S.](#), MathematicsWedAM.03  
[Jose Botta, W.](#), MetallicTuePM107

## K

[Kaijihar, T.](#), MetalsTueAM.04  
[Kamiya, H.](#), MetalsTuePM211  
[Kan, H.](#), AluminumMonPM212  
[Kandelaki, A.](#), CoatingsWedPM108  
[Kang, G.](#), CompositeWedPM211  
[Kang, L.](#), AluminumTueAM.05  
[Kang, Y.](#), MoltenSession(poster)  
[Karamy, G.](#), MineralTuePM210  
[Kardanova, R.](#), MoltenSession(poster)  
[Karpinska, A.](#), MetallicWedPM108  
[Kasai, E.](#), MetalsMonPM210,  
IronTueAM.03, MetalsTuePM106,  
MetalsWedAM.02  
[Kawabata, H.](#), MetalsTuePM211  
[Kawauchi, T.](#), MetalsWedAM.02  
[Kawigraha, A.](#), MetalsMonPM109  
[Ke, Y.](#), RecyclingSession(poster)  
[Kelmendi, S.](#), MineralTueAM.05  
[Kenichi, M.](#), MetalsWedPM210  
[Kenzhaliyev, B.](#), MoltenMonAM.03

[Khokhlov, V.](#), MoltenSession(poster)  
[Kikuchi, N.](#), MetalsMonAM.03  
[Kim, I.](#), PhysicsSession(poster)  
[Kim, Y.](#), MoltenSession(poster)  
[Kim, H.](#), BatteryTuePM108  
[Kim, C.](#), MultiscaleWedPM211  
[Kitamura, S.](#), MetalsMonAM.03  
[Klein, B.](#), MineralMonAM.05,  
MineralMonPM109, MineralTueAM.03  
[Knutsson, S.](#), MiningWedAM.02  
[Kobe, S.](#), MetallicMonAM.03,  
MetallicTueAM.03, MetallicTueAM.04, Met  
allicWedPM210  
[Kochura, V.](#), MetalsMonPM107  
[Kocjan, A.](#), MetallicTuePM211,  
MetallicWedAM.04  
[Kohale, R.](#), MathematicsThuAM.04  
[Kolbeinsen, L.](#), MineralMonAM.04,  
MineralTueAM.02  
[Komoni, V.](#), MaterialsForEnergyMonPM107  
[Kon, T.](#), MetalsWedPM107  
[Kongoli, F.](#), Non-ferrousMonPM106,  
Non-ferrousMonPM211,  
Non-ferrousTueAM.03,  
Non-ferrousTuePM108,  
Non-ferrousTuePM109,  
IronTuePM212, RotaryKilnWedAM.04,  
MetalsWedPM210, MineralMonPM211  
[Koporulina, E.](#), MineralMonPM212  
[Kotobuki, M.](#), MultifunctionalMaterialsTuePM211  
[Kou, M.](#), MetalsWedPM212  
[Kouitat Njiwa, R.](#), MetallicTuePM212,  
MetallicTuePM213, MetallicWedAM.05, M  
etallicWedPM107  
[Kozhemyachenko, V.](#), IronTuePM212  
[Kozlov, P.](#), Non-ferrousTueAM.02,  
RotaryKilnWedAM.02,  
RotaryKilnWedAM.03  
[Kuleshov, S.](#), MoltenSession(poster)  
[Kumar, V.](#), BatteryMonPM211,  
BatteryMonPM212, BatteryTuePM106, Ba  
tteryTuePM107, BatteryTuePM109  
[Kuroki, T.](#), MetalsTueAM.04  
[Kurshumliu, S.](#), Non-ferrousTuePM108  
[Kurunov, I.](#), IronWedPM108,  
IronWedPM212  
[Kushakova, L.](#), Non-ferrousMonAM.04  
[Kushkhov, H.](#), MoltenSession(poster)

## L

[Lai, C.](#), BatteryTueAM.03  
[Lanjewar, M.](#), Session(poster)  
[Lanjewar, R.](#), MathematicsTueAM.04  
[Ledieu, J.](#), MetallicMonAM.03  
[Lee, Y.](#), PhysicsSession(poster)  
[Lee, Y.](#), MoltenSession(poster)  
[Lee, J.](#), MoltenSession(poster)  
[Lee, S.](#), MoltenSession(poster)  
[Lei, H.](#), BatteryTueAM.02  
[Lei, L.](#), IronSession(poster)  
[Leite, F.](#), Non-ferrousMonPM106  
[Lenarcic, J.](#), MetallicWedPM106  
[Leung, H.](#), MultiscaleMonPM107  
[Li, X.](#), MultiscaleWedPM109  
[Li, L.](#), BatteryMonPM210  
[Li, G.](#), BatteryMonAM.03  
[Li, Z.](#), Session(poster)  
[Li, J.](#), RecyclingWedPM211  
[Li, P.](#), MineralTuePM213  
[Li, B.](#), IronWedPM109  
[Li, M.](#), BatteryMonAM.05,  
BatteryMonPM109  
[Li, J.](#), Non-ferrousMonPM108  
[Li, D.](#), Non-ferrousSession(poster)  
[Li, T.](#), MultiscaleMonPM213  
[Li, J.](#), MultiscaleTuePM107  
[Li, X.](#), PhysicsWedPM108  
[Li, Y.](#), CompositeWedPM211  
[Li, S.](#), MineralMonPM107  
[Li, Q.](#), IronMonPM108  
[Li, G.](#), AluminumMonPM106  
[Li, G.](#), AluminumTueAM.02  
[Li, G.](#), MetalsTuePM108,  
MetalsWedPM107  
[Li, L.](#), MetalsSession(poster)  
[Li, Z.](#), MetalsMonPM212  
[Li, P.](#), MetalsWedPM108  
[Li, F.](#), MetalsMonPM213,  
MetalsTuePM213, MetalsWedAM.03  
[Li, F.](#), RecyclingTuePM213,  
RecyclingWedAM.02  
[Li, J.](#), MetalsWedAM.03  
[Li, X.](#), MiningWedAM.04  
[Li, X.](#), MetallicMonPM211  
[Li, Y.](#), IronMonAM.05  
[Li, Y.](#), IronMonAM.05  
[Liang, X.](#), EnergyTuePM107  
[Liang, X.](#), MetalsWedPM108

[Liang, X.](#), MetalsTuePM108,  
MetalsWedPM107  
[Liao, L.](#), Non-ferrousSession(poster)  
[Liao, Z.](#), Non-ferrousMonPM108  
[Liddiard, L.](#), Session(poster)  
[Lijuan, S.](#), MetalsWedPM107  
[Lin, C.](#), MaterialsForEnergyMonPM212  
[Lin, Q.](#), MaterialsForEnergyMonAM.05  
[Lingling, Z.](#), RecyclingWedAM.05  
[Lins, F.](#), IronTueAM.02  
[Lipilin, A.](#), EnergyTueAM.05  
[Liu, Z.](#), Non-ferrousSession(poster)  
[Liu, R.](#), Non-ferrousSession(poster)  
[Liu, X.](#), Session(poster)  
[Liu, G.](#), MiningWedAM.02  
[Liu, J.](#), MineralMonPM107,  
PhysicsWedAM.02, PhysicsWedPM107  
[Liu, R.](#), BatteryMonPM108  
[Liu, Y.](#), BatteryTuePM106  
[Liu, H.](#), PhysicsWedPM109  
[Liu, H.](#), RecyclingSession(poster)  
[Liu, Z.](#), Non-ferrousSession(poster)  
[Liu, Y.](#), RareSession(poster)  
[Liu, J.](#), AluminumMonPM106  
[Liu, Z.](#), MetalsMonPM213,  
MetalsTuePM213, MetalsWedAM.03, Met  
alsWedAM.05  
[Liu, Z.](#), IronMonPM109, MetalsWedAM.05  
[Liu, X.](#), MetalsSession(poster)  
[Liu, S.](#), CoalSession(poster)  
[Liu, Y.](#), PhysicsWedAM.04  
[Liu, J.](#), AluminumMonAM.05  
[Lois, S.](#), MoltenMonPM107  
[Long, H.](#), IronSession(poster)  
[Lopes, A.](#), MetalsSession(poster)  
[Lotter, N.](#), MineralMonAM.03  
[Loveday, B.](#), MineralTuePM109  
[Lu, S.](#), MineralTuePM211,  
MoltenTuePM106  
[Lu, L.](#), MultifunctionalMaterialsTuePM211  
[Lu, X.](#), AluminumTuePM106  
[Lu Lu, G.](#), Non-ferrousTueAM.04  
[Lutsyk, V.](#), Non-ferrousMonPM212,  
MineralMonPM213, MoltenMonPM212,  
MoltenMonPM213

## M

[M. Martini, L.](#), MetallicTuePM107  
[Ma, J.](#), Non-ferrousMonPM108

[Ma, Y.](#), MetallicMonPM213,  
MetallicTuePM109  
[Ma, W.](#), Non-ferrousMonPM213  
[Ma, S.](#), AluminumMonPM211  
[Ma, G.](#), IronMonPM108,  
IronMonPM211, RecyclingTuePM213,  
RecyclingWedAM.02  
[Machado, K.](#), MoltenTueAM.03  
[Magdalinovic, S.](#), Non-ferrousTuePM109  
[Magee, J.](#), MoltenMonPM210  
[Mahmoud, M.](#), MineralSession(poster)  
[Malyshev, V.](#), MoltenSession(poster)  
[Mamhegova, R.](#), MoltenSession(poster)  
[Mao, S.](#), MultiscaleMonAM.03,  
MultiscaleTuePM107  
[Mao, Y.](#), AluminumMonAM.05  
[Maranas, J.](#), BatteryMonAM.04  
[Margusheva, M.](#), MoltenSession(poster)  
[Markoli, B.](#), MetallicMonAM.03,  
MetallicMonPM108  
[Markovic, Z.](#), Non-ferrousTuePM109  
[Marquis, F.](#), MaterialsForEnergyMonAM.02,  
MultifunctionalMaterialsWedAM.05  
[Martins Da Silva, L.](#), IronSession(poster)  
[Matsui, Y.](#), MetalsTuePM107  
[Matsuno, H.](#), MetalsWedPM108  
[Matsuzaki, S.](#), MetalsMonPM106  
[Mauntz, M.](#), EnergyTueAM.02  
[Maureira, P.](#), MetallicTuePM212  
[Mauricio, M.](#), IronWedAM.05  
[Mclean, A.](#), IronMonPM212  
[Meijer, K.](#), MetalsWedPM211  
[Meija, O.](#), MineralMonAM.05  
[Melashvili, Z.](#), Session(poster)  
[Meng, L.](#), IronMonPM211  
[Merdjani, R.](#), Non-ferrousMonPM106  
[Miele, P.](#), Session(poster)  
[Mikadze, O.](#), CoatingsWedPM108  
[Mikadze, G.](#), CoatingsWedPM108  
[Min, X.](#), RecyclingSession(poster)  
[Ming Yan, L.](#), Non-ferrousTueAM.04  
[Mingotti, N.](#), RecyclingTuePM210  
[Mirijanashvili, Z.](#), CoatingsWedPM108  
[Mishra, B.](#), RecyclingMonAM.04  
[Mizutani, M.](#), MetalsMonPM210  
[Mochizuki, T.](#), MetalsWedPM107  
[Mochizuki, Y.](#), MetalsSession(poster)  
[Mohajeri, S.](#), IronMonPM106,  
MetallicTueAM.05



[Molebiemang, G.](#), MineralSession(poster)  
[Molotovska, L.](#), MoltenSession(poster)  
[Moreira Jorge Jr., A.](#), MetallicTuePM107  
[Moscardini, E.](#), RecyclingTuePM212,  
RecyclingWedAM.04,  
RecyclingWedPM108  
[Motta, M.](#), IronWedAM.02  
[Mourao, M.](#), IronMonAM.02  
[Muktibodh, P.](#), MathematicsThuPM212  
[Muktibodh, A.](#), MathematicsMonAM.03,  
MathematicsMonPM212  
[Murakami, T.](#), MetalsWedAM.02  
[Muramatsu, A.](#), MetalsMonAM.03  
[Murati, N.](#), MineralTueAM.05  
[Mustafa, B.](#), MineralTueAM.05

## N

[Nagashima, H.](#), MetalsWedAM.02  
[Naimanbayev, M.](#), Non-ferrousMonAM.05  
[Naito, M.](#), MetalsTuePM211  
[Nakamuro, Y.](#), MetalsTuePM211  
[Namicheishvili, T.](#), Session(poster)  
[Narita, C.](#), IronMonAM.02,  
MetalsTuePM210  
[Nash, P.](#), MoltenMonAM.05,  
CompositeWedPM210  
[Navakazi, V.](#), MaterialsForEnergyMonPM107  
[Neacsu, E.](#), AluminumTuePM108  
[Nersisyan, H.](#), MoltenSession(poster)  
[Ngan, A.](#), MultiscaleMonPM107  
[Ni, H.](#), MetalsSession(poster)  
[Nianxin, F.](#), MoltenTueAM.05  
[Nikolaeva, N.](#), MineralMonPM106,  
EnergyTueAM.03  
[Ning, H.](#), Session(poster)  
[Ning, W.](#), MetalsWedPM213  
[Nishi, M.](#), MetalsTuePM211  
[Nishimura, T.](#), MetalsMonPM210  
[Nishio, M.](#), MetalsSession(poster)  
[Niu, J.](#), MetalsTueAM.05  
[Nkwanyana, S.](#), MineralTuePM109  
[Nogami, H.](#), MetalsMonAM.04,  
IronTueAM.03, MetalsTuePM106, Metals  
WedPM107  
[Nomura, S.](#), MetalsMonPM210,  
MetalsWedAM.02

[Novoselova, I.](#), MoltenSession(poster)  
[Nushi, V.](#), MaterialsForEnergyMonPM107

## O

[Obrien, E.](#), Non-ferrousTuePM108, Non-  
ferrousTuePM109, RotaryKilnWedAM.04  
[Ogama Sitta, B.](#), MetallicTuePM107  
[Ogawa, N.](#), MetalsTueAM.04  
[Ohhashi, S.](#), MetallicMonPM107  
[Oladeji, A.](#), MineralMonPM108  
[Olennikov, A.](#), IronTuePM212  
[Oliveira, E.](#), IronMonAM.04, MetalsWedPM213  
[Oliveira Barreto, P.](#), IronWedAM.02  
[Omel'chuk, A.](#), MoltenMonPM213  
[Oniashvili, G.](#), Session(poster)  
[Ono, H.](#), IronTueAM.05,  
MetalsTuePM211  
[Orimoto, T.](#), MetalsMonPM210  
[Osmani, A.](#), Non-ferrousTuePM108  
[Oye, H.](#), AluminumMonAM.02  
[Oziewicz, Z.](#), MathematicsTuePM213

## P

[P Proenca, M.](#), MetallicTueAM.03  
[Paciornik, S.](#), IronWedAM.05  
[Pagnanelli, F.](#), RecyclingTuePM212,  
RecyclingWedAM.04,  
RecyclingWedPM108,  
RecyclingWedPM210  
[Palo, E.](#), RecyclingWedPM108  
[Paltrinieri, N.](#), RecyclingTuePM210  
[Pan, Z.](#), EnergyTuePM107  
[Pan, X.](#), AluminumMonPM213,  
AluminumTueAM.02  
[Pandhurnekar, C.](#), MathematicsWedPM107  
[Papovic, S.](#), MoltenSession(poster)  
[Parfenova, M.](#), MineralMonPM213  
[Park, Y.](#), PhysicsSession(poster)  
[Pavlov, V.](#), MoltenSession(poster)  
[Pecko, D.](#), MetallicTueAM.03  
[Peng, H.](#), Non-ferrousSession(poster)  
[Peng, N.](#), RecyclingSession(poster)  
[Peng, J.](#), MultiscaleWedPM108  
[Perko, S.](#), MetallicTuePM211  
[Peters, G.](#), MoltenSession(poster)

[Peuser, J.](#), EnergyTueAM.02  
[Pierson, G.](#), MetallicTuePM213,  
MetallicWedAM.05  
[Pinheiro Da Silva, B.](#), IronTuePM213  
[Pinto Da Rocha, E.](#), IronMonAM.04  
[Pintowantoro, S.](#), MetalsMonPM109  
[Podyman, O.](#), MoltenSession(poster)  
[Polnicky, R.](#), Session(poster)  
[Popescu, A.](#), MoltenMonPM109,  
AluminumTuePM108  
[Potapov, A.](#), MoltenSession(poster)  
[Prakash, P.](#), IronWedPM210  
[Prelot, B.](#), MoltenTuePM107  
[Protopopov, E.](#), IronTuePM212  
[Pula, J.](#), MaterialsForEnergyMonPM107  
[Purwanto, H.](#), MetalsWedAM.04

## Q

[Qelaj, M.](#), MaterialsForEnergyMonPM107  
[Qi, C.](#), MoltenSession(poster)  
[Qi, J.](#), MultiscaleWedAM.04  
[Qi, C.](#), MoltenSession(poster)  
[Qian, J.](#), BatteryMonPM107  
[Qian, G.](#), Non-ferrousTuePM106  
[Qiang, D.](#), MoltenMonPM108  
[Qiangjian, G.](#), MetalsMonPM212,  
MetalsWedPM212, MetalsWedPM213  
[Qin, Q.](#), RecyclingWedPM107  
[Qin, J.](#), MetalsMonPM213  
[Qingwei, Q.](#), RecyclingWedPM109  
[Qiu, S.](#), AluminumTuePM211  
[Qiyue, Z.](#), AluminumMonPM108  
[Qu, S.](#), MultiscaleWedPM107  
[Qu, Y.](#), MetalsWedPM109,  
MetalsWedPM211  
[Quarcioni, V.](#), IronSession(poster)

## R

[Raees, A.](#), Session(poster)  
[Rak, J.](#), MathematicsTueAM.02,  
MathematicsThuPM210  
[Razafinjaka, J.](#), EnergyTuePM106  
[Redkin, A.](#), AluminumTuePM210  
[Reshetnikov, Y.](#), Non-  
ferrousTueAM.02, RotaryKilnWedAM.02  
[Ri, V.](#), MoltenSession(poster)  
[Ribeiro, T.](#), IronSession(poster)

[Rizaj, M.](#), Non-ferrousTuePM108  
[Roh, K.](#), BatteryMonPM213  
[Rokicki, P.](#), CoatingsWedPM106  
[Rollim Lopes, L.](#), IronMonAM.04,  
MetalsWedPM213  
[Rowlands, P.](#), MathematicsMonPM108  
[Rudenko, A.](#), AluminumTuePM210  
[Ryazantseva, M.](#), MineralMonPM212  
[Rybenko, I.](#), IronTuePM212  
[Rycerz, L.](#), MoltenTueAM.04

## S

[Safari, M.](#), MineralMonPM211,  
RecyclingWedPM106  
[Safarian, J.](#), MineralMonAM.04,  
MineralTueAM.02  
[Saito, K.](#), MetalsMonAM.02, MetalsMonPM210  
[Sallanne, M.](#), MoltenTueAM.03  
[Salladini, A.](#), RecyclingWedPM108  
[Salyulev, A.](#), MoltenSession(poster)  
[Santilli, R.](#), MathematicsTuePM211,  
MathematicsTuePM212, MathematicsThu  
PM106, MathematicsThuPM107  
[Santilli, P.](#), MathematicsMonAM.02,  
MathematicsTuePM106, MathematicsTue  
PM107, MathematicsTueAM.02  
[Santos Francisco, A.](#), IronMonAM.04,  
MetalsWedPM213  
[Sarou-kanian, V.](#), MoltenTueAM.03  
[Satoh, N.](#), MetalsWedAM.02  
[Savchuk, R.](#), MoltenMonPM213  
[Savilov, S.](#), MultifunctionalMaterialsTuePM212  
[Scarlat, R.](#), MoltenMonAM.02  
[Schwandt, C.](#), MoltenSession(poster)  
[Selman, R.](#), MoltenMonAM.05  
[Sel'menskikh, N.](#), IronWedPM106  
[Shakhnin, D.](#), MoltenSession(poster)  
[Sharipov, R.](#), MoltenMonAM.03  
[Shechtman, D.](#), MetallicMonAM.02  
[Sheikh, R.](#), MoltenSession(poster)  
[Shelke, T.](#), Session(poster)  
[Shen, B.](#), MetallicTuePM108  
[Shen, F.](#), MetalsWedPM212,  
MetalsWedPM213  
[Shi, Z.](#), AluminumMonAM.04  
[Shi, J.](#), MineralSession(poster)  
[Shi, Z.](#), AluminumMonAM.03,



AluminumMonPM106,  
 AluminumMonPM107  
[Shih, K.](#), MineralTuePM108  
[Shishkin, V.](#), MoltenSession(posters)  
[Shu, J.](#), Non-ferrousSession(posters)  
[Shumskiy, V.](#), Non-ferrousMonAM.03,  
 Non-ferrousMonAM.04,  
 Non-ferrousMonPM107  
[Shyinti Kiminami, C.](#), MetallicTuePM107  
[Silva, G.](#), IronTuePM213  
[Silva Guedes De Lima, B.](#), MetallicWedPM107  
[Simons, S.](#), MoltenSession(posters)  
[Siqueira, R.](#), IronWedAM.02  
[Sirbu, F.](#), MoltenMonPM109  
[Siu, K.](#), MultiscaleMonPM107  
[Soare, V.](#), AluminumTuePM108  
[Sobczyk, G.](#), Session(posters)  
[Soderznik, M.](#), MetallicTueAM.04  
[Song, T.](#), CoalSession(posters)  
[Sood, K.](#), MaterialsForEnergyMonPM109  
[Starkey, J.](#), MineralMonAM.02  
[Stefanov, S.](#), MaterialsForEnergyMonAM.04,  
 MaterialsForEnergyMonPM213  
[Stepan, M.](#), Session(posters)  
[Stephen, Z.](#), MultiscaleSession(posters)  
[Sturm, S.](#), MetallicMonAM.03,  
 MetallicTueAM.03, MetallicTueAM.04  
[Su, Y.](#), Session(posters)  
[Su, B.](#), MetalsWedPM109  
[Suleimenov, E.](#), MoltenMonAM.03,  
 MoltenMonAM.04  
[Sumi, I.](#), MetalsTueAM.04  
[Sun, L.](#), MetallicMonAM.04,  
 MetallicMonAM.05  
[Sun, F.](#), MineralSession(posters)  
[Sun, S.](#), MineralTuePM211,  
 MoltenTuePM106  
[Sun, Q.](#), MetalsTuePM109  
[Suo, Z.](#), MultiscaleTueAM.02  
[Sushchenko, A.](#), MoltenSession(posters)  
[Suzuki, S.](#), MetalsTueAM.05  
[Sychev, A.](#), IronWedPM106,  
 IronWedPM107  
[Takehara, K.](#), MetalsWedPM108  
[Tan, H.](#), MultiscaleMonPM211  
[Tanaka, R.](#), MetallicMonPM107  
[Tang, J.](#), MetalsMonPM213,  
 MetalsTuePM213, MetalsWedAM.03, Met  
 alsWedAM.05  
[Tang, Y.](#), MetalsTuePM213,  
 MetalsWedAM.03, MetalsWedAM.05  
[Tangde, V.](#), MathematicsWedPM106  
[Tangde, V.](#), Session(posters)  
[Tanizawa, K.](#), IronTueAM.05  
[Tao, C.](#), Non-ferrousSession(posters)  
[Tao, W.](#), AluminumMonPM107  
[Tavazze, G.](#), Session(posters)  
[Thach, U.](#), MoltenTuePM107  
[Tian, Q.](#), Non-ferrousMonPM109  
[Tian, Y.](#), AluminumMonPM109  
[Tian, M.](#), MetalsWedPM211  
[Tian, N.](#), AluminumTueAM.05  
[Tikhonov, D.](#), IronWedPM108,  
 IronWedPM212  
[Tkacheva, O.](#), AluminumTuePM210  
[Toloue Farrokh, N.](#), RecyclingWedPM212  
[Tomisaki, S.](#), MetalsMonAM.03  
[Tomita, Y.](#), MetalsMonAM.03  
[Tong, Z.](#), RecyclingTuePM213,  
 RecyclingWedAM.02  
[Tonomura, S.](#), MetalsMonAM.03  
[Tordoff, B.](#), MiningWedAM.05  
[Toro, L.](#), RecyclingTuePM212,  
 RecyclingWedAM.04, RecyclingWedPM1  
 08  
[Tot, A.](#), MoltenSession(posters)  
[Trell, E.](#), MathematicsWedAM.02  
[Trtic-petrovic, T.](#), MoltenSession(posters)  
[Tsai, A.](#), MetallicMonPM107  
[Tsubouchi, N.](#), MetalsSession(posters)  
[Tsutsumi, K.](#), MetalsTueAM.04  
[Tsymbol, V.](#), IronTuePM212  
[Tuladhar, B.](#), MathematicsTuePM210,  
 MathematicsWedAM.04  
[Turna, T.](#), IronTueAM.04  
[Tutberidze, A.](#), Session(posters)

## T

[Taifu, L.](#), EnergyTuePM107  
[Takano, C.](#), IronMonAM.02,  
 MetalsMonPM108, MetalsTuePM210

## U

[Uebou, K.](#), MetalsWedAM.02  
[Upolovnikova, A.](#), IronWedPM106,  
 IronWedPM107

[Uskova, N.](#), MoltenSession(poster)  
[Usui, T.](#), IronTueAM.05,  
MetalsTuePM211  
[Utelbayev, B.](#), MoltenMonAM.04

## V

[Vastag, G.](#), MoltenSession(poster)  
[Vazquez, M.](#), MetallicTueAM.03  
[Vieira, L.](#), Non-ferrousMonPM106  
[Vitaku, A.](#), MineralTueAM.05  
[Vitoretti, F.](#), MetalsSession(poster)  
[Voignier, A.](#), MetallicTuePM212,  
MetallicWedAM.05  
[Vorob'eva, V.](#), Non-ferrousMonPM212,  
MineralMonPM213  
[Vougiouklis, T.](#), MathematicsMonPM106,  
MathematicsMonPM109, MathematicsMo  
nPM211, [MathematicsWedPM108]  
[Vougiouklis, S.](#), MathematicsMonPM109  
[Vranes, M.](#), MoltenSession(poster)

## W

[Wang, X.](#), Non-ferrousTueAM.04  
[Wang, P.](#), MineralTuePM212  
[Wang, F.](#), MineralMonAM.05,  
MineralTueAM.03  
[Wang, J.](#), IronSession(poster)  
[Wang, C.](#), Non-ferrousTueAM.05  
[Wang, S.](#), BatteryTueAM.02  
[Wang, J.](#), MineralTuePM213  
[Wang, J.](#), BatteryTueAM.02  
[Wang, F.](#), IronWedPM109  
[Wang, J.](#), BatteryMonAM.05,  
BatteryMonPM109  
[Wang, Q.](#), Non-ferrousMonPM109  
[Wang, J.](#), MultiscaleMonPM108  
[Wang, H.](#), MultiscaleWedPM210  
[Wang, J.](#), MultiscaleWedAM.05  
[Wang, Z.](#), MetalsWedAM.05  
[Wang, F.](#), Non-ferrousSession(poster)  
[Wang, Q.](#), MetallicMonPM109,  
MetallicMonPM212  
[Wang, Z.](#), AluminumMonAM.03,  
AluminumMonAM.04, AluminumMonPM1  
06, AluminumMonPM107  
[Wang, Y.](#), AluminumMonPM108,

AluminumMonPM210,  
AluminumTuePM109  
[Wang, L.](#), AluminumMonPM211  
[Wang, H.](#), MetalsWedAM.05  
[Wang, Y.](#), MetalsWedPM108  
[Wang, Q.](#), MetalsWedAM.04  
[Wang, G.](#), MetalsWedPM106  
[Wang, P.](#), MetalsWedAM.03  
[Wang, Z.](#), IronMonPM109  
[Wang, G.](#), MetalsWedAM.05  
[Wang, Q.](#), AluminumTuePM106  
[Wang, Z.](#), MaterialsForEnergyMonPM210,  
Non-ferrousTuePM106  
[Wang, M.](#), MaterialsForEnergyMonPM210  
[Waroquet, A.](#), MetallicMonAM.02  
[Wazalwar, S.](#), MathematicsWedPM106  
[Wei, Y.](#), MultiscaleTuePM109  
[Wei, H.](#), MoltenMonPM106  
[Wei, Y.](#), MultiscaleMonAM.05  
[Wei, Y.](#), IronSession(poster)  
[Wen, W.](#), Session(poster)  
[Wentang, X.](#), Non-  
ferrousMonPM210, MaterialsForEnergyM  
onAM.03, AluminumMonPM109, MineralM  
onPM210, MineralTueAM.04  
[Wolf, W.](#), MetallicTuePM107  
[Wu, L.](#), IronSession(poster)  
[Wu, F.](#), BatteryMonPM107,  
BatteryMonPM210  
[Wu, H.](#), MoltenMonAM.02  
[Wu, J.](#), Non-ferrousMonPM213  
[Wu, Y.](#), AluminumSession(poster)  
[Wu, S.](#), MetalsWedPM109,  
MetalsWedPM212

## X

[Xi, K.](#), BatteryTuePM109  
[Xia, K.](#), Session(poster)  
[Xiao, W.](#), MaterialsForEnergyMonPM106  
[Xiao, J.](#), Non-ferrousTuePM210  
[Xiaofeng, Z.](#), AluminumMonPM108,  
AluminumMonPM210, AluminumMonPM2  
11, AluminumTuePM109  
[Xiaojun, N.](#), IronSession(poster)  
[Xiaoping, Z.](#), MultiscaleWedPM212

[Xiaoyan, X.](#), Non-ferrousMonPM210, MaterialsForEnergyMonAM.03, AluminumMonPM109, MineralMonPM210, MineralTueAM.04  
[Xie, J.](#), MathematicsSession(posters)  
[Xie, Z.](#), Non-ferrousSession(posters)  
[Xie, F.](#), Non-ferrousTuePM211  
[Xie, L.](#), AluminumTuePM109  
[Xin Bing, X.](#), Non-ferrousTueAM.04  
[Xing, Z.](#), IronWedAM.03  
[Xing, L.](#), MetalsWedPM211  
[Xu, Z.](#), Non-ferrousSession(posters)  
[Xu, K.](#), MultiscaleWedAM.03  
[Xu, H.](#), Session(posters)  
[Xu, B.](#), Session(posters)  
[Xu, R.](#), Non-ferrousTuePM107  
[Xu, M.](#), Non-ferrousMonPM213  
[Xu, R.](#), MetalsWedAM.05  
[Xue, P.](#), MiningWedAM.02  
[Xue, Q.](#), BatteryMonPM210  
[Xue, J.](#), AluminumTueAM.03  
[Xue, P.](#), RecyclingWedPM109  
[Xue, Z.](#), IronMonAM.05, RecyclingWedAM.02

## Y

[Yagi, J.](#), MetalsMonAM.04, MetalsMonPM108, IronTueAM.03, MetalsTueAM.03, MetalsTuePM106  
[Yamamoto, T.](#), MetalsWedPM108  
[Yamamoto, A.](#), MetallicMonPM107  
[Yan, L.](#), AluminumMonPM108  
[Yan, S.](#), Non-ferrousSession(posters)  
[Yan, H.](#), Non-ferrousMonPM108, Non-ferrousTuePM210  
[Yang, W.](#), MultiscaleTuePM212  
[Yang, Y.](#), MineralTuePM211  
[Yang, Q.](#), Session(posters)  
[Yang, Y.](#), MetalsSession(posters)  
[Yang, J.](#), BatteryMonAM.05, BatteryMonPM109, BatteryMonPM212  
[Yang, C.](#), MaterialsForEnergySession(posters)  
[Yang, F.](#), Session(posters)  
[Yang, Y.](#), MaterialsForEnergySession(posters)  
[Yang, W.](#), Non-ferrousMonPM210, MaterialsForEnergyMonAM.03  
[Yang, W.](#), MultiscaleTueAM.03  
[Yang, Y.](#), IronMonPM212  
[Yang, T.](#), IronMonPM109  
[Yang, Q.](#), MiningWedAM.02  
[Yang, Y.](#), MetalsWedPM211  
[Yanxiang, L.](#), IronSession(posters)  
[Yao, X.](#), MultiscaleWedAM.04  
[Yao, Y.](#), MultiscaleTuePM211  
[Ye, Y.](#), BatteryMonPM107  
[Yi, M.](#), Session(posters)  
[Yi, X.](#), MetalsTueAM.03, MetalsTueAM.05  
[Yin, J.](#), Non-ferrousMonPM210, MaterialsForEnergyMonAM.03, AluminumMonPM109, MineralMonPM210, MineralTueAM.04  
[Ying, L.](#), MathematicsSession(posters)  
[Yongan, Z.](#), IronSession(posters)  
[Yoo, B.](#), MoltenSession(posters)  
[Yoon, W.](#), BatteryMonAM.02  
[You, L.](#), MetalsWedAM.03  
[Yu, L.](#), RecyclingWedAM.05  
[Yu, W.](#), BatteryMonAM.05, BatteryMonPM109  
[Yu, S.](#), MultiscaleWedPM211  
[Yu, J.](#), AluminumMonPM106  
[Yu, W.](#), IronMonAM.03  
[Yu, X.](#), MaterialsForEnergyMonPM210  
[Yuan, X.](#), MaterialsForEnergyMonAM.03, AluminumMonPM109, MineralMonPM210, MineralTueAM.04  
[Yue, Y.](#), CoatingsWedPM107, MultiscaleWedAM.03  
[Yulong, G.](#), PhysicsWedPM107

## Z

[Zagar, K.](#), MetallicMonAM.03, MetallicTueAM.04  
[Zaikov, Y.](#), AluminumTuePM210  
[Zakharov, G.](#), Session(posters)  
[Zambrano, A.](#), MetalsTuePM210  
[Zang, D.](#), Session(posters)  
[Zanghi, D.](#), MoltenTueAM.03  
[Zayakin, O.](#), Session(posters)  
[Zdolsek, N.](#), MoltenSession(posters)  
[Zec, N.](#), MoltenSession(posters)  
[Zehetbauer, M.](#), MetallicTuePM210

[Zeilstra, C.](#), MetalsWedPM211  
[Zelenaya, A.](#), MoltenMonPM212,  
MoltenMonPM213  
[Zhai, X.](#), MetalsWedPM109  
[Zhang, X.](#), Non-ferrousSession(posters)  
[Zhang, X.](#), Non-ferrousSession(posters)  
[Zhang, H.](#), MetalsSession(posters)  
[Zhang, X.](#), BatteryMonPM210  
[Zhang, T.](#), AluminumMonPM108,  
AluminumMonPM210, AluminumMonPM211,  
AluminumTuePM109  
[Zhang, W.](#), MineralSession(posters)  
[Zhang, Z.](#), BatteryMonAM.03  
[Zhang, X.](#), IronSession(posters)  
[Zhang, J.](#), Non-ferrousSession(posters)  
[Zhang, T.](#), MultiscaleTuePM106  
[Zhang, K.](#), Session(posters)  
[Zhang, S.](#), MultiscaleMonPM212,  
MultiscaleTuePM107  
[Zhang, Z.](#), Session(posters)  
[Zhang, R.](#), IronSession(posters)  
[Zhang, Y.](#), AluminumMonAM.03  
[Zhang, Y.](#), MultifunctionalMaterialsTuePM211  
[Zhang, S.](#), RareSession(posters)  
[Zhang, J.](#), IronMonPM109  
[Zhang, W.](#), AluminumMonPM108,  
AluminumMonPM210,  
AluminumMonPM211,  
AluminumTuePM109  
[Zhang, J.](#), MetalsTuePM108,  
MetalsWedPM107  
[Zhang, J.](#), MaterialsForEnergyMonAM.05  
[Zhang, Y.](#), Session(posters)  
[Zhang, Y.](#), MetalsSession(posters)  
[Zhang, X.](#), RecyclingWedAM.02  
[Zhang, J.](#), MetalsSession(posters)  
[Zhang, J.](#), MetalsWedAM.05  
[Zhang, J.](#), IronTuePM109  
[Zhang, S.](#), AluminumTuePM106  
[Zhao, Y.](#), Non-ferrousSession(posters)  
[Zhao, T.](#), BatteryMonPM211,  
BatteryTuePM109  
[Zhao, Q.](#), Session(posters)  
[Zhao, T.](#), PhysicsWedAM.03  
[Zhao, G.](#), AluminumTueAM.05  
[Zhao, W.](#), MetalsWedAM.05  
[Zhao, Q.](#), Non-ferrousTuePM106  
[Zheng, W.](#), IronTuePM108  
[Zheng, C.](#), AluminumTuePM109  
[Zheng, Z.](#), IronMonAM.03,  
MetalsTuePM212, MetalsWedPM211  
[Zheng, Y.](#), MetallicMonPM211  
[Zhihe, D.](#), AluminumMonPM108  
[Zhong, Z.](#), Session(posters)  
[Zhou, Y.](#), CompositeWedPM210  
[Zhou, P.](#), MetalsWedPM211  
[Zhou, C.](#), Session(posters)  
[Zhou, H.](#), MultiscaleMonAM.02  
[Zhou, Y.](#), AluminumTueAM.05  
[Zhou, P.](#), Non-ferrousMonPM108  
[Zhou, X.](#), MaterialsForEnergyMonAM.03,  
MineralTueAM.04  
[Zhou, Y.](#), MetalsSession(posters)  
[Zhou, Y.](#), MetalsWedAM.05  
[Zhou, Q.](#), MetalsWedAM.02  
[Zhu, T.](#), MoltenTueAM.02  
[Zhu, X.](#), MineralTuePM211,  
MoltenTuePM106  
[Zhu, X.](#), IronWedAM.03  
[Zhu, T.](#), MultiscaleTuePM107,  
MultiscaleTuePM213  
[Zhu, Y.](#), MultifunctionalMaterialsTuePM211  
[Zhu, Z.](#), IronMonPM108  
[Zhu, C.](#), MetalsTuePM108,  
MetalsWedPM107  
[Zhu, Y.](#), MetalsSession(posters)  
[Zhu, Y.](#), MetalsSession(posters)  
[Zhuang, Z.](#), MultiscaleMonAM.04  
[Zhuchkov, V.](#), IronWedPM106,  
IronWedPM107  
[Zodape, S.](#), Session(posters)  
[Zodape, S.](#), MathematicsThuAM.02  
[Zou, Z.](#), MetalsWedPM109,  
MetalsWedPM211  
[Zulli, P.](#), MetalsMonAM.05  
[Zuo, P.](#), PhysicsWedAM.02  
[Zuzek Rozman, K.](#), MetallicMonAM.03,  
MetallicTueAM.03

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# LE GRAND NANCY, LA MÉTROPOLE DE TOUTES LES INTELLIGENCES



EN FRANCE, AU CŒUR DE LA RÉGION GRAND EST ET DE L'EUROPE, LE GRAND NANCY FAIT PARTIE DES GRANDES MÉTROPOLES QUI COMPTENT. PORTRAIT D'UN TERRITOIRE QUI CULTIVE LES EFFERVESCENCES INTELLECTUELLE, ÉCONOMIQUE ET CULTURELLE.

## ...QUI CULTIVE UN ART DE VIVRE

De la Ville Vieille à la place Stanislas, en passant par ses nombreux lieux de spectacles, bars et restaurants, la capitale des ducs de Lorraine cultive passionnément son art de vivre. Attirés par son patrimoine historique et culturel, les visiteurs sont nombreux à être surpris par le tempérament bien trempé de cette métropole de l'Est, qui exprime sa joie de vivre. Terrasses de cafés, bonnes tables et enseignes tendance lui donnent un petit air de fête toute l'année, de la Grand Rue au quartier de la Primatiale... Ces lieux, que l'on relie à pied, constituent la cartographie incontournable de la ville "by night".

## ...À HAUTE QUALITÉ ARCHITECTURALE

Vous allez découvrir une ville à haute qualité environnementale, culturelle et architecturale, classée à l'UNESCO pour son ensemble XVIII<sup>e</sup> s., et aussi berceau de l'Art nouveau français. Ici, se marient harmonieusement tous les styles, du Moyen Âge à l'architecture la plus contemporaine. La Pépinière et ses 23 hectares de parc vous attendent pour un running ou une simple balade et, en lien avec ses traditions universitaires botaniques et horticoles, c'est une des métropoles de France les plus riches en espaces verts !

## ...CRÉATIVE

À la croisée de nombreuses disciplines artistiques, le Grand Nancy est riche de sa diversité culturelle. Chaque année, des centaines de spectacles permettent au public et aux artistes de se rencontrer. L'agglomération compte également six musées d'envergure : le Musée des beaux-arts, le Musée de l'École de Nancy, le Musée lorrain, et les établissements de culture scientifique et technique que sont le Muséum-Aquarium, le Musée de l'histoire du fer et le Jardin botanique Jean-Marie Pelt. La galerie Poiriel, face à la Gare, est le lieu des expositions dédiées à l'art contemporain et au design.



## VERS UNE MÉTROPOLE THERMALE DU 21<sup>E</sup> SIÈCLE

Revenant aux sources du thermalisme du début du 20<sup>e</sup> siècle à Nancy, le programme Grand Nancy Thermal marque l'ambition partagée de créer un pôle d'activités aquatiques autour des concepts de bien-être, de forme, de détente et de santé.

Prévue pour 2020, cette station thermale urbaine sera unique en France, notamment par sa situation au cœur d'une métropole.

## UNE MÉTROPOLE ENTREPRENANTE, COMPÉTITIVE ET INNOVANTE

- Une aire urbaine de 476 000 habitants.
- 45 000 étudiants et une communauté universitaire de 6 000 personnes.
- 4<sup>e</sup> position sur le plan national (hors Paris) pour ses écoles d'ingénieurs.
- 20 500 établissements pour 138 000 emplois, dont 7 000 dans le numérique.
- 62 000 participants en 2015 accueillis au Centre de congrès Prouvé.

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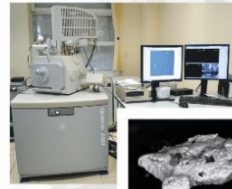
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