

2017 :: SUSTAINABLE INDUSTRIAL PROCESSING SUMMIT & EXHIBITION



BARRIOS
INTERNATIONAL
SYMPOSIUM



DODDS
INTERNATIONAL
SYMPOSIUM



GAUNE-ESCARD
INTERNATIONAL
SYMPOSIUM



GOODALL
INTERNATIONAL
SYMPOSIUM



LOTTER
INTERNATIONAL
SYMPOSIUM



MARQUIS
INTERNATIONAL
SYMPOSIUM

PROGRAM



Special Address



Donna J. Nelson
President

American Chemical Society

22-26 Oct 2017
Fiesta Americana
Condesa Cancun
Mexico

Nobel Laureates Events



Dan Shechtman
2011 Nobel Prize
Chemistry



Ada Yonath
2009 Nobel Prize
Chemistry



Ferid Murad
1998 Nobel Prize
Medicine/BioChemistry



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Phone: 1-514-344-8786 **Toll Free:** 1-877-2-FLOGEN (Within North America) **Fax:** 1-514-344-0361

Summit President



Florian Kongoli
FLOGEN Technologies Inc.
Canada / USA

Symposia Committees



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National Autonomous
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University of Rennes1
France

Contents

Summit President	2
Symposia Committees	2
Welcome Message	7
Calendar of Events	9
Monday Schedule	10
Tuesday Schedule	11
Wednesday Schedule	12
Thursday Schedule	13
Meeting Rooms Diagram	14
International Committee	16
Sponsors	19
Social Events	20
Accompanying Activities	20
Summit Plenary	21
Scientific Program	24
Oral Presentations	24
Monday	24
Tuesday	41
Wednesday	56
Thursday	71
Posters	81
Technical Program Authors Index	92
Sponsor Logos & Corporate Section	105
Organization Sponsor	105
Corporate Sponsors	105
Professional Societies	105
Institutes	106
Media	106
Partner Events	106
Journals and Publishers	107
Partner Airlines	108

Welcome Message



Dr. Patricio **Barrios**



Prof. Harold **Dodds**



Prof. Marcelle **Gaune-Escard**



Prof. David **Goodall**



Dr. Norman **Lotter**



Prof. Fernand **Marquis**

Welcome to the 2017 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 2017 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:

- Dr. Patricio **Barrios** - 2017 honoree with [Barrios International Symposium](#) on Sustainable Non-ferrous Smelting and Hydro/Electrochemical Processing
- Prof. Harold **Dodds** - 2017 honoree with [Dodds International Symposium](#) on Sustainable Energy Production
- Prof. Marcelle **Gaune-Escard** - 2017 honoree with [Gaune-Escard International Symposium](#) on Sustainable Molten Salt and Ionic Liquid Processing
- Prof. David **Goodall** - 2017 honoree with [Goodall International Symposium](#) on Sustainability of World Ecosystems in Anthropocene Era
- Dr. Norman **Lotter** - 2017 honoree with [Lotter International Symposium](#) on Sustainable Mineral Processing
- Prof. Fernand **Marquis** - 2017 honoree with [Marquis International Symposium](#) on New and Advanced Materials and Technologies for Energy, Environment and Sustainable Development

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.



FLOGEN
STAR OUTREACH

Inspiring events with
Prof. Dan Shechtman
Science and Beauty of Crystals

Prof. Dan Shechtman
2011 Nobel Laureate in Chemistry

22-26 October 2017, Fiesta Americana Condesa, Cancun, Mexico



FLOGEN
STAR OUTREACH

Inspiring events with
Prof. Ada Yonath
Good and Bad Bacteria
Science/Human Synergies

Prof. Ada Yonath
2009 Nobel Laureate in Chemistry

22-26 October 2017, Fiesta Americana Condesa, Cancun, Mexico



FLOGEN
STAR OUTREACH

Inspiring events with
Prof. Ferid Murad
How a harmful inorganic air pollutant turned out beneficial for human biology & health

Prof. Ferid Murad
1998 Nobel Prize Medicine/BioChemistry

22-26 October 2017, Fiesta Americana Condesa, Cancun, Mexico

Dr. Florian Kongoli
President of the Organizing Committee
Chairman FLOGEN Stars Outreach
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Calendar of Events

		SHORT COURSES									
		LUNCH FOR SHORT COURSE PARTICIPANTS									
		SUMMIT REGISTRATION									
SUN Oct 22	8:30-12:30	Room1 Condessa II	Room2 Peninsula III	Room3 Peninsula I	Room4 Peninsula IV	Room5 Peninsula II	Room6 Condessa IA	Room7 Condessa IB	Room8 Maria Luisa & Fernanda	Room9 Condessa III	Room10 Maria Mercedes & Beatriz
	13:00-16:00	OPENING COCKTAIL - FULL BUFFET DINNER, AND CARIBEAN DANCING SHOW - Pool Deck Area									
	19:00-23:00	SUMMIT PLENARY - Condessa Ballroom									
	8:15-10:30	COFFEE BREAK/ POSTERS/ EXHIBITION - Condessa Foyer									
	10:30-11:00	BARRIOS 1	DODDS 1	GAUNE-ESCARD 1	BATTERY 1	LOTTER 1	MARQUIS 1	MARQUIS 2	MARQUIS 3	SISAM 1	IRON 1
MON Oct 23	11:00-13:00	LUNCH/POSTERS/EXHIBITION									
	13:00-14:00	BARRIOS 2	DODDS 2	GAUNE-ESCARD 2	BATTERY 2	LOTTER 2	MARQUIS 4	MARQUIS 5	MARQUIS 6	SISAM 2	IRON 2
	14:30-16:30	COFFEE BREAK/ POSTERS/ EXHIBITION - Condessa Foyer									
	16:30-18:30	COCKTAIL/FULL BREAK DINNER/ MEXICAN DANCING SHOW - Beach									
	19:00-22:30	SUMMIT PLENARY - Condessa Ballroom									
	8:15-10:30	COFFEE BREAK/ POSTERS/ EXHIBITION - Condessa Foyer									
	10:30-11:00	BARRIOS 3	DODDS 3	GAUNE-ESCARD 3	BATTERY 3	LOTTER 3	MARQUIS 7	MARQUIS 8	MARQUIS 9	SISAM 3	IRON 3
TUE Oct 24	11:00-13:00	LUNCH/POSTERS/EXHIBITION									
	13:00-14:30	BARRIOS 4	DODDS 4	COATINGS	BATTERY ROUND TABLE	LOTTER ROUND TABLE	MARQUIS 10	MARQUIS 11	MARQUIS 12	SISAM 4/ ROUND TABLE	METALS 1
	14:30-16:30	COFFEE BREAK/ POSTERS/ EXHIBITION - Condessa Foyer									
	16:30-18:30	COCKTAIL/GALA DINNER/AWARDS CEREMONY/LAS VEGAS SHOW - Condessa Ballroom									
	19:00-22:30	SUMMIT PLENARY - Condessa Ballroom									
	8:15-10:30	COFFEE BREAK/ POSTERS/ EXHIBITION - Condessa Foyer									
	10:30-11:00	BARRIOS 5	DODDS 5	MATH 1	RECYCLING 1	ENVIRONMENT 1	MARQUIS 13	MARQUIS 14	MARQUIS 15	COMPOSITE 1	METALS 2
WED Oct 25	11:00-13:00	LUNCH/POSTERS/EXHIBITION									
	13:00-14:00	BARRIOS 6	DODDS 6	MATH 2	RECYCLING 2	ENVIRONMENT 2	MARQUIS 16	MARQUIS 17	MARQUIS 18	COMPOSITE 2	MARQUIS 19
	14:30-16:30	COFFEE BREAK/ POSTERS/ EXHIBITION - Condessa Foyer									
	16:30-18:30	COCKTAIL/ BUFFET DINNER/CIRCUS KUZA - Condessa Ballroom or Outdoors (TBA)									
	19:00-22:30	SUMMIT VIP PANEL DISCUSSION - Condessa Ballroom									
	8:15-10:30	COFFEE BREAK/ POSTERS/ EXHIBITION - Condessa Foyer									
	10:30-11:00	BARRIOS 7	DODDS 7	MULTISCALE	RECYCLING 3	ENVIRONMENT ROUND TABLE	MARQUIS 20	MARQUIS 21	MARQUIS 22	COMPOSITE 3	MARQUIS 23
THU Oct 26	11:00-13:00	LUNCH/POSTERS/EXHIBITION									
	13:00-14:00	BARRIOS 8	DODDS 8	GAUNE-ESCARD ROUND TABLE	RECYCLING ROUND TABLE	ENVIRONMENT ROUND TABLE	MARQUIS 24	MARQUIS 25	MARQUIS 26	COMPOSITE 4	MARQUIS 27
	14:30-16:30	COFFEE BREAK/ POSTERS/ EXHIBITION - Condessa Foyer									
	16:30-18:30	FREE TIME/ ORGANIZED ACTIVITIES									
	19:00-22:30	FREE TIME/ ORGANIZED ACTIVITIES									

Monday Schedule

SYMPOSIUM	BARRIOS Non-ferrous	DODDS Energy	GAUNE-ESCARD Ionic Liquids	BATTERY	LOTTER Minerals	MARQUIS Advanced Materials		SISAM	Iron
ROOM	Condesa II	Peninsula III	Peninsula I	Peninsula IV	Peninsula I	Condesa IA	Condesa IB	Condesa III	Maria Mercedes & Maria Beatriz
8:15	SUMMIT PLENARY (Condesa Ballroom)								
10:30	COFFEE BREAK/POSTERSEXHIBITION - Condesa Foyer								
11:00	159 K. Mayhew	41 H. Dodds	187 G. Kipourou	149 J. Maranas	325 N. Lotter	204 S. Silva	233 C. Schvezov	227 P. Alam	298 R. Koulat Njiva
11:30	165 G. Rios	124 W. Williams	188 T. Oncsik	341 F. Yang	162 A. Menzies	170 J. Seidel	245 T. Okura	222 T. Matsubara	120 G. Lapicki
12:00	269 T. Gonzales	257 M. Mansson	189 R. Sheikh	95 J. Chun	310 S. Graham	112 G. Park	34 Y. Vorobiov	211 S. Thakare	342 O. Forstlund
12:30	360 L. Vieira	202 S. Stefanov	102 A. Popescu	270 S. Natarajan	281 A. Javadi	147 T. Kocsis	297 V. Domanov	219 V. Sidorov	355 M. Zehrbauer
13:00	LUNCH								
14:30	326 D. Kirilov	56 W. Hines	163 S. Choi	345 J. Park	337 J. Starkey	107 N. Kim	248 F. Akhtar	356 D. Koutsogeorgis	314 A. Rockett
15:00	79 M. Munoz	86 T. Reregan	164 S. Bae	347 C. Pint	184 C. Marion	109 Y. Kwon	319 F. Yang	58 N. Chikhradze	315 N. Barreau
15:30	288 B. Shahani	182 K. Park	181 Z. Markovic	274 Y. Cheng	143 R. Murtani	110 J. Kim	111 J. Hwang	324 M. Monastyrrov	353 P. Zabierowski
16:00	194 H. Park	144 A. Bhalekar	139 L. Rycerz	296 G. Li	99 B. Tordoff	176 A. Pekrishvili	150 C. Mulligan	220 A. Trchounian	318 P. Tsoulka
16:30	COFFEE BREAK/POSTERSEXHIBITION - Condesa Foyer								
19:00	COCKTAIL/FULL BUFFET DINNER/MEXICAN DANCING SHOW - Beach								

Tuesday Schedule

SYMPOSIUM	BARROS Non-ferrous	DODDS Energy	GAUNE/ESCARD		BATTERY	LOTTER Minerals	MARQUIS Advanced Materials		SISAM	Iron Metals											
			COATINGS																		
ROOM	Condessa II		Peninsula III		Peninsula I		Peninsula IV		Peninsula II		Condessa IA		Condessa IB		Maria Luisa & Maria Fernanda		Condessa III		Maria Mercedes & Maria Beatriz		
	SUMMIT PLENARY (Condessa Ballroom)																				
TUES 04/24	8-15	COFFEE BREAK/POSTER/EXHIBITION - Condessa Foyer																			
	10-30	285	352	90	340	100	126	336	74	239	173										
	11-00	T. Okura	T. Turna	R. Fehrmann	T. Yamada	E. Schepers	Y. Kim	L. Rosendahl	M. Chikradze	B. Gautier	E. Thirco Fadero										
	11-30	Y. Kato	M. Maunzt	T. Trifc-Petrovic	J. Zheng	B. Mustafa	S. Rodil	A. Tsygarenko	G. Tan	221	46										
	12-00	94	263	70	339	155	275	262	32	224	200										
		R. Santilli	V. Tangle	O. Al-Juboori	K. T. Teshima	M. Araujo	J. Haydjary	Y. Matsukawa	N. Thadhani	A. Gavriljuk	E. Souza										
	12-30	207	136	108	371	271	142	216	264	273	53										
		X. Guo	W. Jacoby	Y. Liu	K. Afantis	A. Ivanii	F. Xue	T. Ozbakkaloglu	Y. Nikolenko	M. Wenska	Y. Yang										
	13-00	LUNCH																			
	14-30	105	145	212		Round Table	Round Table	Z. Xia	E. Eliav	C. Shang	329										
		K. Parameswaran	A. Bhalekar	S. Patil							A. Dawari										
	15-00	186	304	338		Round Table	Round Table	228	286	208	261	152									
	K. Parameswaran	P. Mamanti Sealerte	P. Rokicki		Round Table	Round Table	T. Chikada	A. Henni	M. Ghauri	S. Kobe	V. Shumskiy										
15-30	166	240	260		Round Table	Round Table	293	284	223	289	47										
	J. Annakowitsch	J. Badenhorst	K. Kolwas		Round Table	Round Table	E. Wang	Y. Sassa	A. Sarpal	Z. Wang	S. Imeri										
16-00	203	48			Round Table	Round Table	115	241	234	Closing Remarks	91										
	A. Sadri	M. Tyagi	Round Table		Round Table	Round Table	E. Souza	R. Singh	N. Oladoja	J.M. Dubois	A. Kandelaki										
16-30	COFFEE BREAK/POSTER/EXHIBITION - Condessa Foyer																				
19-00	COCKTAIL/GALA DINNER/AWARDS CEREMONY/LAS VEGAS SHOW - Condessa Ballroom																				

Wednesday Schedule

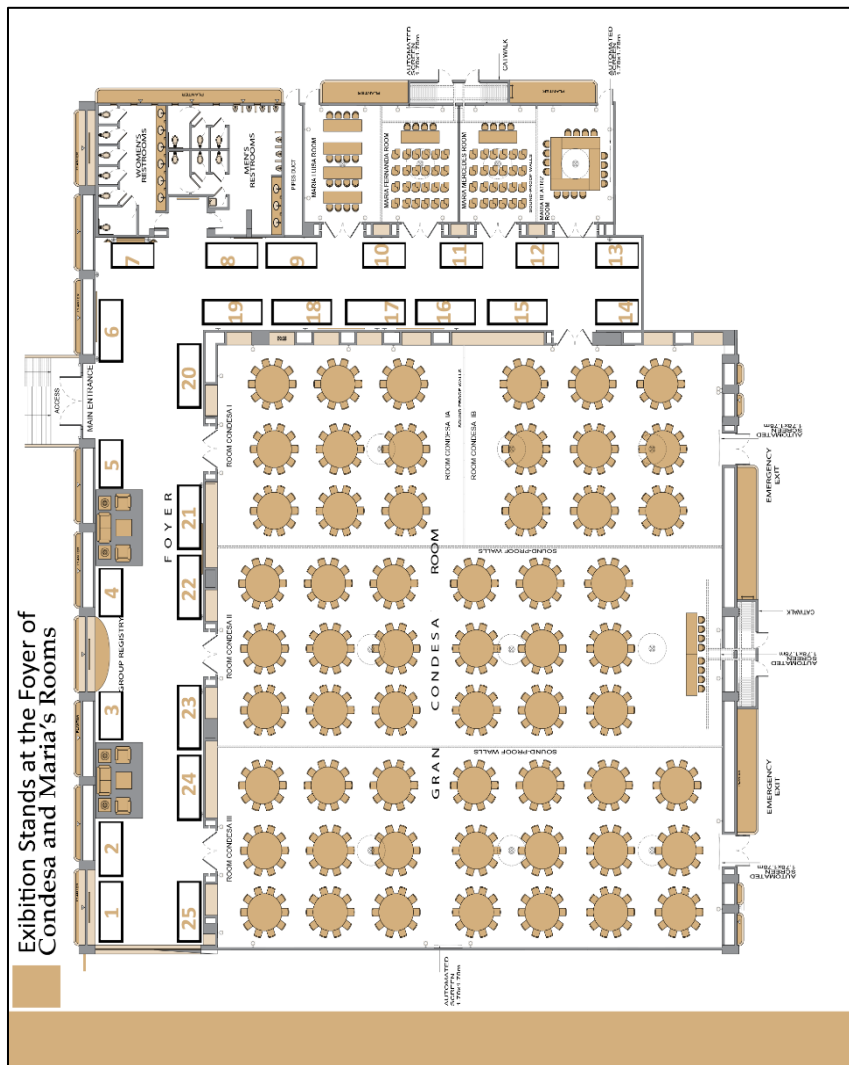
SYMPOSIUM	BARRIOS Non-ferrous	DODDS Energy	MATHEMATICS	RECYCLING	ENVIRONMENT	MARQUIS Advanced Materials		COMPOSITE	METALS MARQUIS
ROOM	Condesa II	Peninsula III	Peninsula I	Peninsula IV	Peninsula II	Condesa IA	Condesa IB	Condesa III	Maria Mercedes & Maria Beatriz
8:15									
10:30									
11:00	E. Felipe	S. Stefanov	D. Vucinic	P. Kozlov	I. Ohimiah	Q. Li	W. Proud	K. Plapale	V. Vorobeva
11:30	M. Moraes	I. Mabatokeng Masitha	P. Rowlands	T. Relegan	O. Maxwell	P. Jiang	N. Chikhatze	A. Naughton-Duszova	R. Dalwatkar
12:00	K. Chung	W. Jacoby	Q. Wang	C. Sorger	O. Maxwell	K. Miyazawa	A. Henni	F. Ogawa	Round Table
12:30	C. Sagadin	A. Esmaeili	Q. Wang	T. Yamamoto	M. Parast	C. Chia	A. Peikrishvili	I. Vozga	Round Table
13:00									
14:30	Round Table	A. Esmaeili	V. Dvoeglazov	S. Wegscheider	M. Parast	H. Ouidadesse	G. Bokuchava	N. Boshkov	V. Karagiozaki
15:00	Round Table	A. Esmaeili	V. Dvoeglazov	J. von Schötle	F. Aristone	T. Kluener	T. Prikhnia	F. Ogawa	B. Ebin
15:30	Round Table	A. Esmaeili	Z. Oziewicz	F. Pagnanelli	Round Table	H. Ouidadesse	K. Afantis	A. Medina Ramirez	Z. Kushlashvili
16:00	Round Table	A. Esmaeili	Round Table	I. Ibrahim	Round Table	X. Wang	T. Lambert	S. Pourbafarani	J. Dutta Majumdar
16:30									
19:00									

Thursday Schedule

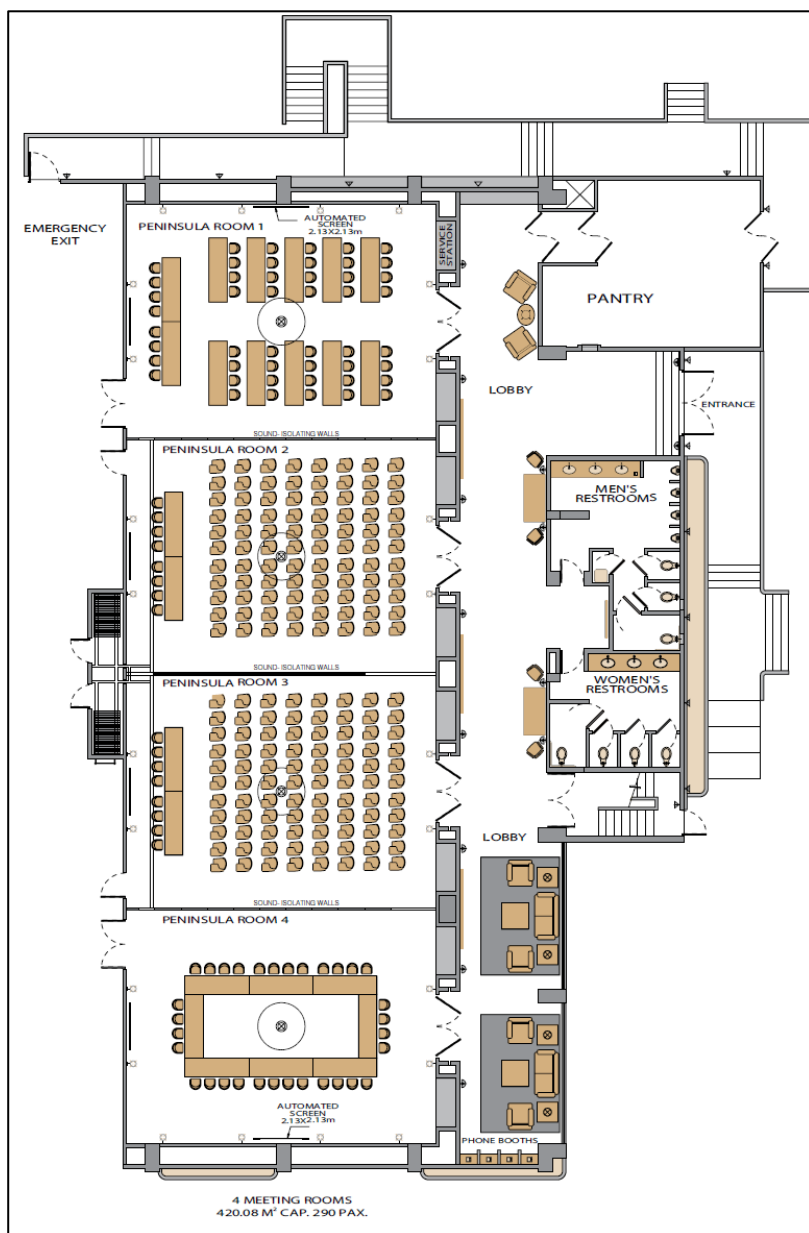
SYMPOSIUM	BARRIOS Non-ferrous	DODDS Energy	MULTISCALE	RECYCLING	ENVIRONMENT	MARQUIS Advanced Materials		COMPOSITE	MARQUIS Advanced Materials
ROOM	Condessa II	Peninsula III	Peninsula I	Peninsula IV	Peninsula II	Condessa IA	Condessa IB	Condessa II	Maria Mercedes & Maria Beatriz
8:15						SUMMIT PLENARY (Condessa Ballroom)			
10:30			18	313	330	185	133	236	303
11:00	Round Table	A. Esmaeili	M. Zhang	F. Paganelli	Round Table	F. Castro	A. Mamals	M. Iqbal	M. Pech-Canul
11:30	Round Table	Round Table	K. Xu	R. Paoli	Round Table	F. Marquis	T. Prikhna	M. Kumar	H. Koyanaka
12:00	Round Table	Round Table	Round Table	Round Table	Round Table	K. Miyazawa	R. Tomoshige	A. Malipatil	S. Chirambatte Peter
12:30	A. Zamuner Filho	Round Table	Round Table	Round Table	Round Table	A. Guldashvili	N. Abbas Shah	N. Safari	V. Bhosale
13:00						LUNCH			
14:30	Z. Wang	Round Table	Round Table	Round Table	Round Table	J. Zheng	S. Manickam	M. Soler	I. Manna
15:00	S. Yan	Round Table	Round Table	Round Table	Round Table	A. Omer	H. Elsayed-Ali	R. Lanjewar	A. Linev
15:30	V. Lutsyk	Round Table	Round Table	Round Table	Round Table	Round Table	Round Table	Round Table	Round Table
16:00	S. Krasikov	Round Table	Round Table	Round Table	Round Table	Round Table	Round Table	Round Table	Round Table
16:30									
19:00						COFFEE BREAK/POSTER/EXHIBITION - Condessa Foyer			
						FREE TIME/ORGANIZED ACTIVITIES			

Meeting Rooms Diagram

Condesa and Maria Rooms



Peninsula Rooms



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. Please select a continent below to view the associated organizers.



AFRICA

- Dee **Bradshaw**, University of Cape Town, South Africa

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- Shuichi **Iwata**, University of Tokyo, Japan
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- Jang Sick **Park**, Korea Institute of Science and Technology Information(KISTI), South Korea
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- Guo **Xueyi**, Central South University Changsha, Hunan, China
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- Manfred **Mauntz**, cmc Instruments GmbH, Germany
- Hassane **Oudadesse**, Université de Rennes 1, France
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- Tamer **Turna**, Yildirim Energy Investments, Turkey
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- Thomas **Gonzales**, Hatch, USA
- M Colin **Joudrie**, Teck Resources, Canada

- Qizhen (Katherine) **Li**, Washington State University, USA
- Marc A. **Meyers**, University of California, San Diego, USA
- Marissa **Morales-Rodriguez**, Oak Ridge National Laboratory, USA
- Eugene **Olevsky**, San Diego University, USA
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- Martin **Pech-Canul**, Cinvestav, Mexico
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- Wesley **Williams**, Louisiana State University, USA

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- Jorge H. **Meza** Viveros, Southern Peru, Peru
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- Asociacion Peruana de Metalurgia, Materiales e Mineracion
- Gesellschaft der Metallurgen und Bergleute e. V.
- IOM3 - The Institute of Materials, Minerals and Mining
- International Association of Colloid and Interface Scientists
- Sociedade Portuguesa de Química
- MRS Serbia
- Slovenian Chemical Society
- The Molten Salt Discussion Group

Institutes

- IBRAM – Brazilian Mining Association
- IMNR – National R&D Institute for Nonferrous and Rare Metals, Romania
- INICOP – Institute for International Cooperation e.V., Germany

Academic Institutions

- Ferdinand Tavadze Institute of Metallurgy & Materials Science, Georgia

Media

- Minerals Engineering International

Journals and Publishers

- Advances in Applied Ceramics
- Aluminum International Today
- Applied Earth Science
- Canadian Mining Journal
- Casting Plant and Technology
- ChemElectroChem Journal
- ChemistryViews
- Copper Worldwide
- Corrosion Engineering, Science, and Technology
- Environmental Application & Science
- De Gruyter Open
- Diamante A&T
- Ironmaking & Steelmaking
- Journal of International
- Journal of Mining and Metallurgy
- Mineral Processing & Extractive Metallurgy
- Nanomaterials and Energy
- Open Chemistry
- "Ore and Metals" Publishing House
- Taylor & Francis

Partner Airlines

- SKYTEAM Airlines
- Air Canada
- Air France & KLM

Social Events

(Preliminary)

Sunday Oct 22: Opening Event, Cocktail, Full Buffet Dinner, and Caribbean Dancing Show **Attire:** Business Casual (Pool Deck Area)

Monday Oct 23: Cocktail, Full Buffet Dinner, and Mexican Dancing Show.
Attire: Business Casual (Beach)

Tuesday Oct 24: Cocktail, Gala Dinner, Awards Ceremony, and Las Vegas Show
Attire: Black tie/Business (Condesa Ballroom)

Wednesday Oct 25: Cocktail, Full Buffet Dinner, and Circus Kuza
Attire: Business Casual (Condesa Ballroom or Outdoors – TBA)

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 during the registration process. Due to space limitation, individuals who have not pre-registered need to pay an additional fee of 50 USD 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 for each activity.

Accompanying Activities

Free Participation of all attendees' guests/companion in all social activities, group dinners, and shows for those who have pre-registered during registration process and are staying at Fiesta Americana Condesa. Due to space limitation, individuals who have not pre-registered need to pay an additional fee of 50 USD on site to participate on social events.

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

Detailed information can be found at: <http://www.flogen.org/sips2017?gid=42>

For on-site booking, please contact the organizers.

Summit Plenary

(Preliminary as of October 6, 2017 – may be subject to change)

SESSION: **SUMMIT PLENARY**

Mon Oct, 23 2017

Room: **Grand Ballroom**

Session Chair: Florian Kongoli

08:15: [SummitPlenaryMonAM01] General Plenary

Summit Thematic Opening

Florian Kongoli¹ ; ¹Flogen Technologies Inc., Mont-Royal, Canada;

Paper Id: 361

08:30: [SummitPlenaryMonAM02] General Plenary

Science and Beauty of Crystals

Dan Shechtman¹ ; ¹Technion, Israel & Iowa State University, USA (*Nobel Laureate*);

Paper Id: 366

09:00: [SummitPlenaryMonAM03] General Plenary

The European Environmental Policies: A Vector Aiming to Sustainability

Patricio Barrios¹ ; ¹Aurubis, Hamburg, Germany;

Paper Id: 354

09:30: [SummitPlenaryMonAM04] General Plenary

Evaluation of Subvention Schemes for Lignite Electricity Plants in the Aftermath of the Paris Agreement - 2015

Tamer Turna¹ ; ¹Yildirim Energy Investments Inc, Maslak, Turkey;

Paper Id: 358

10:00: [SummitPlenaryMonPM05] General Plenary

Electricity Production Choices and Consequences

Harold Dodds¹ ; ¹University of Tennessee, Knoxville, USA;

Paper Id: 359

13:00 LUNCH

SESSION: **SUMMIT PLENARY**

Tue Oct, 24 2017

Room: **Grand Ballroom**

Session Chair: Florian Kongoli

08:15: [SummitPlenaryTueAM01] General Plenary

Thematic Address 1

Florian Kongoli¹ ; ¹Flogen Technologies Inc., Mont-Royal, Canada;

Paper Id: 362

08:30: [SummitPlenaryTueAM02] General Plenary

Good and Bad Bacteria - Science/Human Synergies

Ada Yonath¹ ; ¹Weizmann Institute of Science, Rehovot, Israel; (*Nobel Laureate*)

Paper Id: 365

09:00: [SummitPlenaryTueAM03] General Plenary

Creative Approaches to Chemical Sustainability

Donna Nelson¹ ; ¹University of Oklahoma USA, Oklahoma, USA;

Paper Id: 364

09:30: [SummitPlenaryTueAM04] General Plenary

Oxidative Stress: from Life Sustainability to Life Unsustainability: from Blood Regulation in Brain to Alzheimer Disease

Christian Amatore¹ ; ¹CNRS & PSL, French Academy of Sciences, Paris, France;

Paper Id: 300

10:00: [SummitPlenaryTuePM05] General Plenary

Perspectives on the Role of New and Advanced Materials and Technologies for Energy, Environment and Sustainability

Fernand Marguis¹ ; ¹San Diego State University, San Diego, USA;

Paper Id: 42

13:00 LUNCH

SESSION: SUMMIT PLENARY

Wed Oct, 25 2017

Room: **Grand Ballroom**

Session Chair: Florian Kongoli

08:15: [SummitPlenaryWedAM01] General Plenary

Thematic Address 2

Florian Kongoli¹ ; ¹Flogen Technologies Inc., Mont-Royal, Canada;

Paper Id: 363

08:30: [SummitPlenaryWedAM02] General Plenary

The Discovery and Role of Nitric Oxide and Cyclic GMP in Biological Signaling

Ferid Murad¹ ; ¹George Washington University, Washington, USA; (*Nobel Laureate*)

Paper Id: 367

09:00: [SummitPlenaryWedAM03] General Plenary

YILDIRIM Group: A Diversified Multinational Conglomerate that Simultaneously Achieves Growth, Social Development, and Environmental Protection

Robert Yuksel Yildirim¹ ; ¹Yildirim Group, Istanbul, Turkey;

Paper Id: 357

09:30: [SummitPlenaryWedAM04] General Plenary

Interfaces: Small Features for Big Achievements in Sustainable Materials

Dominique Chatain¹ ; ¹CINaM/CNRS, Marseille, France;

Paper Id: 294

10:00: [SummitPlenaryWedPM05] General Plenary

High Efficiency of Renewable Energy Sources Through SPD Processing Of Bulk Nanostructured Solids

Michael J. Zehetbauer¹ ; Ernst Bauer² ; Roland Groessinger² ; Gerhard Krexner¹ ; Maciej Krystian³ ; Peter Rogl⁴ ; Gerda Rogl⁵ ; Erhard Schafler¹ ; ¹University of Vienna, Faculty of Physics, Wien, Austria; ²Vienna University of Technology, Faculty of Physics, Wien, Austria; ³Austrian Institute of Technology, Center for Health & Bioresources, Wiener Neustadt, Austria; ⁴University of Vienna, Faculty of Chemistry, Wien, Austria; ⁵Christian Doppler Laboratory for Thermoelectricity, Wien, Austria;

Paper Id: 348

13:00 LUNCH

SESSION: **SUMMIT PLENARY**

Thu Oct, 26 2017

Room: **Grand Ballroom**

Session Chair: Florian Kongoli

08:15: [SummitPlenaryThuAM01] General Plenary

Thematic Address 3

Florian Kongoli¹ ; ¹Flogen Technologies Inc., Mont-Royal, Canada;

Paper Id: 370

08:30: [SummitPlenaryThuAM02] General Plenary

Interface engineering for next generation rechargeable batteries: An Overview and Perspectives

Katerina Aifantis¹ ; ¹Univ of Florida, Gainesville, United States;

Paper Id: 373

09:00: [SummitPlenaryThuAM03] General Plenary

Leather and Lace: Adventures of a Female Academic in Entrepreneur-land

Janna Maranas¹ ; ¹Penn State University, University Park, United States;

Paper Id: 369

9:30-10:30: PLENARY PANEL DISCUSSION WITH VIPs AND HONOREES

Scientific Program

Oral Presentations

Monday

08:15 AM - 10:30 PM [SUMMIT PLENARY](#)

10:30 AM Break

SESSION: **IronMonAM-R10**

5th Intl. Symp. on Advanced Sustainable Iron and Steel Making

Mon Oct, 23 2017

Room: **Maria Mercedes & Maria Beatriz**

Session Chairs: Tateo **Usui**; Mery-Cecilia **Gomez-Marroquin**;

Session Monitor: TBA

11:00: [IronMonAM01] Plenary

Natural Resources Consciousness and Energy Conservation in Ironmaking and Steelmaking Technologies in Japan

Tateo Usui¹ ; Masaaki Naito² ; Hideki Ono³ ; Hirokazu Konishi³ ; Hirotoishi Kawabata³ ; Tomoyuki Mizukoshi⁴ ; Paulo Assis⁵ ; ¹Osaka University, Ibaraki, Japan; ²Nippon Steel & Sumikin Technology Co., Ltd., Futtsu, Japan; ³Osaka University, Suita, Japan; ⁴Osaka Research Institute of Industrial Science and Technology, Izumi, Japan; ⁵UFOP (Federal University of Ouro Preto) / REDEMAT, Ouro Preto, Brazil; Paper Id: 121_

11:30: [IronMonAM02] Plenary

[Oxygen applications for sustainable steelmaking/steel melting] **Characterization of Peruvian Linz Donawitz-Ld Steel Sludges**

Mery-Cecilia Gomez Marroquin¹ ; Jose Carlos D Abreu² ; ¹Universidad Nacional de Ingenieria-UNI, Lima, Peru; ²PUC-Rio, Rio de Janeiro, Brazil; Paper Id: 103_

12:00: [IronMonAM03] Keynote

Mathematical Modeling of SER Jet-Emulsion Process

Valentin Tsymbal¹ ; Alexey Olennikov¹ ; Inna Rybenko¹ ; Pavel Sechenov¹ ; Florian Kongoli² ; ¹Siberian State Industrial University, Novokuznetsk, Russian Federation; ²Flogen Technologies Inc., Mont-Royal, Canada; Paper Id: 180_

12:30: [IronMonAM04] Keynote

Basic Physicochemical Principles of ORIEN Process - A Direct Iron Ore to Steel Technology

Genrikh Dorofeev¹ ; Florian Kongoli² ; ¹Ferro-Technology', Moscow, Tula, Russian Federation; ²Flogen Technologies Inc., Mont-Royal, Canada; Paper Id: 192_

13:00 LUNCH

SESSION: **IronMonPM-R10**

5th Intl. Symp. on Advanced Sustainable Iron and Steel Making

Mon Oct, 23 2017

Room: **Maria Mercedes & Maria Beatriz**

Session Chairs: Geovane **Silva**; Fikret **Furtun**; Session Monitor: TBA

14:30: [IronMonPM05] Keynote

Efficiency Improvement of Blast Furnace Main Iron Trough Castable Refractory Consumption With 3D Laser Scan Analysis

Emre Acar¹ ; Fikret Furtun² ; ¹Kardemir Iron Steel Industry Trade & Company Inc., Karabük, Turkey; ²KARDEMIR IRONAND STEEL Co, KARABUK, Turkey;
Paper Id: 134_

15:00: [IronMonAM06]

Influence of Improvement of the Sinter Screening in CSA Blast Furnace Process

Geovane Silva¹ ; Bruno Pinheiro Da Silva² ; Andre Hirano³ ; Marilene Landin⁴ ; Maxwell Pereira Cangani⁵ ; ¹Thyssenkrupp CSA, Rio de Janeiro, Brazil; ²ThyssenKrupp CSA, Rio de Janeiro, Brazil; ³ThyssenKrupp, Rio de Janeiro, Brazil; ⁴Thyssenkrupp CSA, Santa Cruz, Brazil; ⁵thyssenkrupp CSA, Rio de Janeiro, Brazil;
Paper Id: 317_

15:30: [IronMonAM07]

Optimization of the Sinter Product Specification CSA and its Impacts in the Blast Furnace Process

Maxwell Pereira Cangani¹ ; Cristiane Galiuzzi² ; Geovane Silva³ ; Rafael Pereira² ; ¹thyssenkrupp - Companhia Siderúrgica do Atlântico (CSA), Rio de Janeiro, Brazil; ²thyssenkrupp - Companhia Siderurgica do Atlantico (CSA), Rio de Janeiro, Brazil; ³Thyssenkrupp CSA, Rio de Janeiro, Brazil;
Paper Id: 316_

16:00: [IronMonAM08]

Research of Applying Rare-Earth Metals to Improve the Quality of Transport Steels

Leonid Smirnov¹ ; ¹ , Ekaterinburg, Russian Federation;
Paper Id: 78_

08:15 AM - 10:30 PM **SUMMIT PLENARY**

10:30 AM Break

SESSION: **Non-ferrousMonAM-R1**

Barrios International Symposium on Sustainable Non-ferrous Smelting and Hydro/Electrochemical Processing

Mon Oct, 23 2017

Room: **Condesa II**

Session Chairs: Guillermo **Rios**; Thomas **Gonzales**; Session Monitor: TBA

11:00: [Non-ferrousMonAM01] Plenary

The CESL Cu-As Process: Sustainable Processing of Enargite-Bearing Copper Concentrates

Keith Mayhew¹ ; Susan Stocker² ; Patricio Barrios³ ; ¹Teck Resources Limited, Richmond, Canada; ², Richmond, Canada; ³Aurubis, Hamburg, Germany (Deutschland);

Paper Id: 159_

11:30: [Non-ferrousMonAM02] Plenary

Treatment of Gases from Flash Furnace and Slag Cleaning Furnace Tapping Ventilation System

Guillermo Rios¹ ; ¹Atlantic Copper SLU, Huelva, Spain;

Paper Id: 165_

12:00: [Non-ferrousMonAM03] Plenary

Comparison of Smelting Technologies for the 21st Century

Thomas Gonzales¹ ; Ian Candy² ; John Bryant¹ ; ¹Hatch Associates, Scottsdale, United States; ²Hatch Associates, Mississauga, Canada;

Paper Id: 269_

12:30: [Non-ferrousMonAM04] Plenary

Optimization and Control of Hoboken Converter Operations With FLOGEN CONTOP Control Expert System

Lucas C. Vieira¹ ; Marcella F. Guzzo¹ ; Mauricio Bittencourt Marques² ; Marcos Henrique Carlos De Souza³ ; Redouane Merdjani⁴ ; Florian Kongoli⁵ ; ¹Paranapanema, Dias d'Avila, Brazil; ²Paranapanema S.A., Brazil, Dias d'Avila, Brazil; ³FLOGEN TECHNOLOGIES INC., Sao Paulo, Brazil; ⁴FLOGEN TECHNOLOGIES INC., Mont-Royal, Canada; ⁵Flogen Technologies Inc., Mont-Royal, Canada;

Paper Id: 360_

13:00 LUNCH

SESSION: **Non-ferrousMonPM-R1**

Barrios International Symposium on Sustainable Non-ferrous Smelting and Hydro/Electrochemical Processing

Mon Oct, 23 2017

Room: **Condesa II**

Session Chairs: Miguel Angel **Munoz**; Dimo **Kirilov**; Session Monitor: TBA

14:30: [Non-ferrousMonPM05] Plenary

Pirdop Copper Plant: An Overview of its Sustainable Growth and Progress

Dimo Kirilov¹; ¹Aurubis Bulgaria AD, Pirdop, Bulgaria;

Paper Id: 326_

15:00: [Non-ferrousMonAM06] Plenary

Cobre Las Cruces Hydrometallurgical Plant Improvements

Miguel Angel Munoz¹; Pablo Daniel Garcia²; Enrique Delgado¹; ¹First Quantum Minerals Ltd, 41860 Gerena, Spain; ²First Quantum Minerals Ltd, Gerena, Spain;

Paper Id: 79_

15:30: [Non-ferrousMonAM07]

Distribution Air Improvements at Rio Tinto Kennecott Copper

Bijan Shahriari¹; Michael Loveless²; Maciej Jastrzebski¹; Kenly Ochoa³; Adam Blackmore¹; Ryan Wilde³; Ivan Marincic¹; Stephanie Gangl¹; Melvin Pong¹; Thomas Gonzales⁴; Volodymyr Ponomar¹; Rafik Chekiri⁵; Philippe Lavoie⁵; Dustin Vickress¹; ¹Hatch, Mississauga, Canada; ²Rio Tinto Kennecott Copper, South Jordan, United States; ³Rio Tinto Kennecott, South Jordan, United States; ⁴Hatch Associates, Scottsdale, United States; ⁵University of Toronto Institute for Aerospace Studies, Toronto, Canada;

Paper Id: 288_

16:00: [Non-ferrousMonAM08]

Novel Design of Ferronickel Smelting Slag by Utilizing Red Mud as a Fluxing Agent: Thermochemical Computations and Experimental Confirmation

Hyunsik Park¹; Byung-soo Kim²; Jae-cheon Lee²; ¹KIGAM, Daejeon, Korea (Republic of [South] Korea); ²Korea Institute of Geoscience and Mineral Resources, Daejeon, Korea (Republic of [South] Korea);

Paper Id: 194_

08:15 AM - 10:30 PM **SUMMIT PLENARY**

10:30 AM Break

SESSION: **EnergyMonAM-R2**

Dodds International Symposium on Sustainable Energy Production

Mon Oct, 23 2017

Room: **Peninsula 3**

Session Chairs: Wesley **Williams**; Martin **Mansson**; Session Monitor: TBA

11:00: [EnergyMonAM01] Plenary

Electricity Production Choices and Consequences: Part II

Harold Dodds¹ ; ¹University of Tennessee, Knoxville, United States;

Paper Id: 41_

11:30: [EnergyMonAM02] Keynote

Synergistic Opportunities Between Nuclear Energy and the Oil and Gas Industry

Wesley Williams¹ ; ¹Louisiana State University, Baton Rouge, United States;

Paper Id: 124_

12:00: [EnergyMonAM03] Keynote

Towards Green and Safe Sodium Batteries

Martin Mansson¹ ; Ola Kenji Forslund¹ ; ¹KTH Royal Institute of Technology, Kista Stockholm, Sweden;

Paper Id: 257_

12:30: [EnergyMonAM04]

Eco-Hazard Zones and Sustainability Development of Urban Areas

Sonja Stefanov¹ ; ¹, Novi Sad, Serbia and Montenegro (formerly Yugoslavia);

Paper Id: 202_

13:00 LUNCH

SESSION: **EnergyMonPM-R2**

Dodds International Symposium on Sustainable Energy Production

Mon Oct, 23 2017

Room: **Peninsula 3**

Session Chairs: Wes **Hines**; Koshik **Park**; Session Monitor: TBA

14:30: [EnergyMonPM05] Keynote

An Integrated Information Architecture for Lifecycle Prognostics and Reliability Improvement

Wes Hines¹ ; Zach Welz¹ ; ¹University of Tennessee, Knoxville, United States;

Paper Id: 56_

15:00: [EnergyMonAM06] Keynote

Reactor Safety for Lead or Lead-Bismuth (LBE) Cooled Reactors-Fuel-Coolant Interactions

Teodora Retegan¹ ; ¹Chalmers University of Technology, Gothenburg, Sweden;

Paper Id: 86_

15:30: [EnergyMonAM07]

A New Paradigm for Environmental Safety Management of Chemical Industry in Korea : Offsite Risk Assessment

Koshik Park¹ ; ¹Myongji Univ., Yongin-si, Korea (Republic of [South] Korea);
Paper Id: 182_

16:00: [EnergyMonAM08]

Thermodynamic Stability of Irreversible Processes: A Gibbs-Duhem Type Theory and the Fourth Law of Thermodynamics

Anil A. Bhalekar¹ ; Bjarne Andresen² ; ¹R. T. M. Nagpur University,, NAGPUR, India; ²University of Copenhagen, COPENHAGEN, Denmark;
Paper Id: 144_

08:15 AM - 10:30 PM [**SUMMIT PLENARY**](#)

10:30 AM Break

SESSION: MoltenMonAM-R3

Gaune-Escard International Symposium on Sustainable Molten Salt and Ionic Liquid Processing

Mon Oct, 23 2017

Room: **Peninsula 1**

Session Chairs: Tamas **Oncsik**; Georges **Kipourous**; Session Monitor: TBA

11:00: [MoltenMonAM01]

Anhydrous Feed Preparation for Molten Salt Electrolysis of Lanthanum Chloride

William Judge¹ ; **Georges Kipourous**² ; ¹Materials Science and Engineering, University of Toronto, Toronto, Canada; ²Materials Engineering, Dalhousie University, Halifax, Canada;
Paper Id: 187_

11:30: [MoltenMonAM02]

Ion-Specificity in Atmospheric CO2 Capture by Diamino Carboxylate PILs; Effect of Diluents

Tamas Oncsik¹ ; Benjamin Mitschke² ; Vijayaraghavan Ranganathan¹ ; Douglas Macfarlane² ; ¹Monash University, Clayton, Australia; ²Monash University, Melbourne, Australia;
Paper Id: 188

12:00: [MoltenMonAM03]

The Thermal Decomposition of Sodium Carbonate and Calcium Carbonate in Molten Sodium Chloride and the Molten Salt Synthesis of Sodium Silicate and Calcium Silicate.

Rashed Sheikh¹ ; ¹University College London, London, United Kingdom (Great Britain);
Paper Id: 189

12:30: [MoltenMonAM04]

Anodic Dissolution and Recovery of Gold and Silver from Waste Electronic Equipment by Using Ionic Liquids

Ana-Maria Julieta Popescu¹; Virgil Constantin²; Cristina Donath¹; Elena Ionela Neacsu²; Vasile Soare³; Marian Burada⁴; Ionut Constantin⁵; Marcelle Gaune Escard⁶; ¹Ilie Murgulescu Institute of Physical Chemistry, Laboratory of Molten Salts, Bucharest, Romania; ²Ilie Murgulescu Institute of Physical Chemistry, Bucharest, Romania; ³National R&D Institute for Nonferrous and Rare Metals - IMNR, Pantelimon, Romania; ⁴National R&D Institute for Nonferrous and Rare Metals – IMNR, Pantelimon, Romania; ⁵National R&D Institute for Nonferrous and Rare Metals IMNR, Pantelimon, Romania; ⁶Polytech, Marseille, France;
Paper Id: 102_

13:00 LUNCH

SESSION: MoltenMonPM-R3

Gaune-Escard International Symposium on Sustainable Molten Salt and Ionic Liquid Processing

Mon Oct, 23 2017

Room: **Peninsula 1**

Session Chairs: Sang-Eun Bae; Suhee Choi; Session Monitor: TBA

14:30: [MoltenMonPM05]

Real-Time Monitoring of Metal Ion Concentration in LiCl-KCl Containing Multi Component

Suhee Choi¹; Sang-eun Bae¹; Tae-hong Park¹; ¹Korea Atomic Energy Research Institute, Daejeon, Korea (Republic of [South] Korea);
Paper Id: 163_

15:00: [MoltenMonAM06]

Electrochemical Behaviors of Uranium and Lanthanide Cations in LiCl-KCl Melt Investigated by Electrochemical and Spectroscopic Methods

Sang-eun Bae¹; Suhee Choi¹; Tae-hong Park¹; Jong-yun Kim¹; Young Hwan Cho¹; Jei-won Yeon¹; ¹Korea Atomic Energy Research Institute, Daejeon, Korea (Republic of [South] Korea);
Paper Id: 164_

15:30: [MoltenMonAM07]

The Impact of Melting and Rapid Cooling of Smelting Slag on Some of its Properties

Srdjana Magdalinovic¹; **Zoran Markovic**²; Florian Kongoli³; ¹Institute for Mining and Metallurgy Bor, Bor, Serbia and Montenegro (formerly Yugoslavia); ²Univ. of Belgrade - Technical faculty Bor, Serbia, Bor, Serbia and Montenegro (formerly Yugoslavia); ³Flogen Technologies Inc., Mont-Royal, Canada;
Paper Id: 181_

16:00: [MoltenMonAM08]

Thermodynamic and Transport Properties of Lanthanide(III) Halide - Alkali Metal Halide Systems

Leszek Rycerz¹ ; Anna Danczak¹ ; Ida Chojnacka¹ ; Marcelle Gaune Escard² ; ¹Wroclaw University of Science and Technology, Wroclaw, Poland; ²AIX-MARSEILLE UNIVERSITE/POLYTECH, CNRS/IUSTI UMR7343, Marseille, France;
Paper Id: 139_

08:15 AM - 10:30 PM [SUMMIT PLENARY](#)

10:30 AM Break

SESSION: **BatteryMonAM-R4**

4th Intl. Symp. on Sustainable

Secondary Battery Manufacturing and Recycling

Mon Oct, 23 2017

Room: **Peninsula 4**

Session Chairs: Katerina **Aifantis**; Janna **Maranas**; Fuqian **Yang**; Session Monitor: TBA

11:00: [BatteryMonAM01] Invited

Mixed Anions Control Ion Assisted Conduction in Na Ion Batteries

Janna Maranas¹ ; ¹Penn State University, University Park, United States;
Paper Id: 149_

11:30: [BatteryMonAM02] Invited

Au@TiO₂ Nanotube Arrays as Durable Lithium-Ion Battery Negative Electrodes

Fuqian Yang¹ ; ¹University of Kentucky, Lexington, United States;
Paper Id: 341_

12:00: [BatteryMonAM03]

A New Synthetic Route to Anhydrous Metal Fluoride Nanocomposites for High Capacity Cathodes of Secondary Li Batteries

Jinyoung Chun¹ ; Jinwoo Lee² ; ¹Korea Institute of Ceramic Engineering & Technology (KICET), Jinju, Korea (Republic of [South] Korea); ²POSTECH, Pohang, Korea (Republic of [South] Korea);
Paper Id: 95_

12:30: [BatteryMonAM04] Invited

The Role of Stress-diffusion Interactions on the Fracture and Crack Growth in Lithium Ion Battery Electrodes Using the Extended Finite Element Method

Katerina Aifantis¹ ; Narasimhan Swaminathan² ; **Sundararajan Natarajan**³ ; ¹University of Arizona, Tucson, United States; ²Indian Institute of Technology-Madras, Chennai, India; ³Indian Institute of Technology Madras, Chennai, India;
Paper Id: 270_

13:00 LUNCH

SESSION: **BatteryMonPM-R4**

Mon Oct, 23 2017

**4th Intl. Symp. on Sustainable
Secondary Battery Manufacturing and Recycling**

Room: **Peninsula 4**

Session Chairs: Yang-Tse **Cheng**; Jonghyun **Park**; Session Monitor: TBA

14:30: [BatteryMonPM05] Invited

Hybrid Three-dimensional Electrodes Based on Additive Manufacturing

Jonghyun Park¹; Jie Li¹; Ming Leu¹; Rahul Panat²; ¹Missouri University of Science and Technology, Rolla, United States; ²Carnegie Mellon University, Pittsburgh, United States;

Paper Id: 345_

15:00: [BatteryMonAM06] Invited

Overcoming Manufacturing Limitations for Lithium-Sulfur Batteries with over 500 Wh/kg Energy Density

Mengya Li¹; Rachel Carter¹; **Cary Pint**¹; ¹Vanderbilt University, Nashville, United States;

Paper Id: 347_

15:30: [BatteryMonAM07] Invited

A solvent-free dry powder coating process for low-cost manufacturing of lithium ion battery electrodes

Yang-tse Cheng¹; Mohanad Al Shroofy¹; Ming Wang¹; ¹University of Kentucky, Lexington, United States;

Paper Id: 274_

16:00: [BatteryMonAM08] Invited

Protection Strategies for Lithium Anode in Lithium-sulfur Battery

Guoran Li¹; Sheng Liu¹; Xueping Gao¹; ¹Nankai University, Tianjin, China;

Paper Id: 296_

SESSION: **MineralMonAM-R5**

Mon Oct, 23 2017

**Lotter International Symposium on Sustainable
Mineral Processing**

Room: **Peninsula 2**

Session Chairs: Andrew **Menzies**; Shaun **Graham**; Session Monitor: TBA

11:00: [MineralMonAM01] Plenary

The Development and Business Value of Modern Process Mineralogy

Norman Lotter¹; ¹Flowsheets Metallurgical Consulting Incorporated, Sudbury, Canada;

Paper Id: 325_

11:30: [MineralMonAM02] Keynote

Automated Mineralogy and Elemental Mapping Using μ XRF: Spatial Distribution of Au-Ag-Bearing Minerals in Epithermal Deposits

Andrew Menzies¹; Manon Gosselin²; Max Patzschke³; Gertruida Gloy⁴; Samuel Scheller⁵; ¹Universidad Católica del Norte, Antofagasta, Chile; ², BRIX, France; ³Bruker Nano, Berlin, Germany (Deutschland); ⁴Bruker, Brisbane, Australia; ⁵Bruker Nano GmbH, Berlin, Germany (Deutschland);
Paper Id: 162_

12:00: [MineralMonAM03] Invited

Automated Mineralogy μ XRF The Past, Present and Future

Shaun Graham¹; ¹Carl Zeiss, Cambridge, United Kingdom (Great Britain);
Paper Id: 310_

12:30: [MineralMonAM04]

Effect of Water Quality on Formation of Hydrogen Peroxide and its Behavior on Flotation

Alireza Javadi¹; ¹University of Kashan, kashan, Iran (Islamic Republic of Iran);
Paper Id: 281_

13:00 LUNCH

SESSION: **MineralMonPM-R5**

Lotter International Symposium on Sustainable Mineral Processing

Mon Oct, 23 2017

Room: **Peninsula 2**

Session Chairs: John **Starkey**; Kristian **Waters**; Session Monitor: TBA

14:30: [MineralMonPM05] Plenary

Comminution Circuit Design μ XRF Using SAG Technology to Maximize Project Value

John Starkey¹; ¹Starkey & Associates Inc., Oakville, Canada;
Paper Id: 337_

15:00: [MineralMonAM06] Plenary

The Pre-Concentration of the Nechalacho Deposit: Selective Comminution

Kristian Waters¹; **Christopher Marion**²; ¹McGill University, Department of Mining and Materials Engineering, Montreal, Canada; ²McGill University, Montreal, Canada;
Paper Id: 184_

15:30: [MineralMonAM07]

Comparison of Flotation of Cu-Ni Sulfide Ores Containing Different Non-magnetic/Magnetic Pyrrhotite Ratios

Ravinder Multani¹; Raymond Langlois¹; **Kristian Waters**²; ¹McGill University, Montreal, Canada; ²McGill University, Department of Mining and Materials Engineering, Montreal, Canada;
Paper Id: 143_

16:00: [MineralMonAM08] Invited

The Application of Recent Advances in Automated Mineralogy to Address Problems in Mineral Processing Flowsheet Optimization

Benjamin Tordoff¹ ; **Shaun Graham**² ; ¹Zeiss, Cambridge, United Kingdom (Great Britain); ²Carl Zeiss, Cambridge, United Kingdom (Great Britain);

Paper Id: 99_

08:15 AM - 10:30 PM **SUMMIT PLENARY**

10:30 AM Break

SESSION: **AdvancedMaterialsMonAM-R6**

Marquis International Symposium on New and Advanced Materials and Technologies for Energy, Environment and Sustainable Development

Mon Oct, 23 2017

Room: **Condesa IA**

Session Chairs: Jan **Seidel**; S. Ravi P. **Silva**; Session Monitor: TBA

11:00: [AdvancedMaterialsMonAM01] Plenary

Carbon Electronics for the 21st Century

S. Ravi P. Silva¹ ; ¹University of Surrey, Guildford, United Kingdom (Great Britain);

Paper Id: 204_

11:30: [AdvancedMaterialsMonAM02] Keynote

Domain Walls as Nanoscale Functional Elements

Jan Seidel¹ ; ¹UNSW Sydney, Sydney, Australia;

Paper Id: 170_

12:00: [AdvancedMaterialsMonAM03]

Effect of Heat Treatment Paths on the Microstructure and Mechanical Properties of High Cr Containing Ultrahigh Strength Steels

G.bae Park¹ ; **Yunik Kwon**¹ ; K.h. Kwon² ; **Nack Kim**¹ ; ¹POSTECH, Pohang, Korea (Republic of [South] Korea); ²RIST, Pohang, Korea (Republic of [South] Korea);

Paper Id: 112_

12:30: [AdvancedMaterialsMonAM04] Keynote

Advanced Methods and their Integration in Superior Biofuel Production

Tunde Kocsis¹ ; Maria Szilagyi² ; Laszlo Kotai³ ; ¹Hungarian Academy of Science, Budapest, Hungary; ²Deuton-X Ltd, Erd, Hungary; ³Research Centre for Natural Sciences, Hungarian Academy of Sciences, Budapest, Hungary;

Paper Id: 147_

13:00 LUNCH

SESSION: **AdvancedMaterialsMonPM-R6**

**Marquis International Symposium on
New and Advanced Materials and
Technologies for Energy, Environment
and Sustainable Development**

Mon Oct, 23 2017

Room: **Condesa IA**

Session Chairs: Yunik **Kwon**; Nack **Kim**; Session Monitor: TBA

14:30: [AdvancedMaterialsMonPM05] Keynote

High Specific Strength Alloys for Sustainable Society

Nack Kim¹ ; ¹POSTECH, Pohang, Korea (Republic of [South] Korea);

Paper Id: 107_

15:00: [AdvancedMaterialsMonAM06]

**Development of Precipitation Hardened Austenitic High Mn Steels for
Automotive Applications**

Yunik Kwon¹ ; **Nack Kim**¹ ; ¹POSTECH, Pohang, Korea (Republic of [South] Korea);

Paper Id: 109_

15:30: [AdvancedMaterialsMonAM07]

**Effect of Deformation Twins on Recrystallization Behavior of Magnesium Alloy
Sheets**

Jae H. Kim¹ ; Byeong-chan Suh² ; Ji Hyun Hwang³ ; Myeong-shik Shim¹ ; **Nack Kim**¹ ; ¹POSTECH, Pohang, Korea (Republic of [South] Korea); ²NIMS, Tsukuba, Japan; ³Pohang University of Science and Technology, Pohang, Korea (Republic of [South] Korea);

Paper Id: 110_

16:00: [AdvancedMaterialsMonAM08]

**Shock-Assisted Liquid-Phase Consolidation of SHS-Processed Ta-Al Based
Composites.**

Akaki Peikrishvili¹ ; Laszlo Keckes² ; George Tavadze³ ; Bagrat Godibadze⁴ ; ¹F. Tavadze Institute of Metallurgy and Materials Science, Tbilisi, Georgia; ²Us Army Research laboratory, Aberdeen, United States; ³Ferdinand Tavadze Institute of Metallurgy and Materials Science, Tbilisi, Georgia; ⁴Tsulukidze Mining Institute, Tbilisi, Georgia;

Paper Id: 176_

08:15 AM - 10:30 PM SUMMIT PLENARY

10:30 AM Break

SESSION: **AdvancedMaterialsMonAM-R7**

**Marquis International Symposium on
New and Advanced Materials and
Technologies for Energy, Environment
and Sustainable Development**

Mon Oct, 23 2017

Room: **Condesa IB**

Session Chairs: Toshinori **Okura**; Carlos Enrique **Schvezov**; Session Monitor: TBA

11:00: [AdvancedMaterialsMonAM01] Plenary

Production and Characterization of TiO₂ Coatings for Hemocompatible and Photocatalytic Applications

Carlos Enrique Schvezov¹ ; ¹Institute of Materials of Misiones (IMAM) CONICET iC¹/₂ UNaM, Misiones, Argentina;

Paper Id: 233_

11:30: [AdvancedMaterialsMonAM02] Keynote

Development of New Superionic Conductor Narpsio Glass-Ceramics

Toshinori Okura¹ ; ¹Kogakuin University, Hachioji, Japan;

Paper Id: 245_

12:00: [AdvancedMaterialsMonAM03]

Nano-Structured Chalcogenide Semiconductor Materials for Economic and Efficient Solar Energy Converters

Yurii Vorobiov¹ ; Iker Rodrigo Chavez Urbiola² ; Rafael Ramirez Bon² ; Pavel Vorobiev³ ; Francisco Javier F. J. Willars Rodriguez² ; Paul Horley³ ; ¹CINVESTAV Unidad Queretaro, Queretaro, Mexico; ²CINVESTAV-IPN, Unidad Queretaro, Queretaro, Mexico; ³CIMAV Monterrey, Monterrey, Mexico;

Paper Id: 34_

12:30: [AdvancedMaterialsMonAM04] Invited

Hazard of Uranium, Plutonium, and Curium Transfer in the Form of Volatile Oxides and Hydroxides in the Atmosphere

Vladimir Domanov¹ ; ¹, Dubna, Russian Federation;

Paper Id: 297_

11:30 LUNCH

SESSION: **AdvancedMaterialsMonPM-R7**

**Marquis International Symposium on
New and Advanced Materials and
Technologies for Energy, Environment
and Sustainable Development**

Mon Oct, 23 2017

Room: **Condesa IB**

Session Chairs: Farid **Akhtar**; Fuqian **Yang**; Session Monitor: TBA

14:30: [AdvancedMaterialsMonPM05] Keynote

Processing of Hierarchically Porous Adsorbents for Decarbonization

Farid Akhtar¹ ; ¹Luleå¹/₂ University of Technology, Luleå¹/₂, Sweden;

Paper Id: 248_

15:00: [AdvancedMaterialsMonAM06] Keynote

Supercapacitors From Biomass-derived Activated Carbons

Fugian Yang¹ ; ¹University of Kentucky, Lexington, United States;

Paper Id: 319_

15:30: [AdvancedMaterialsMonAM07]

Effect of Alloying Element on Deformation Behavior of Binary Magnesium Alloys

Ji Hyun Hwang¹ ; Byeong-chan Suh² ; **Jae H. Kim**³ ; Myeong-shik Shim³ ; B. J. Lee¹ ;

Jaimyun Jung¹ ; H. S. Kim¹ ; **Nack Kim**³ ; ¹Pohang University of Science and

Technology, Pohang, Korea (Republic of [South] Korea); ²NIMS, Tsukuba,

Japan; ³POSTECH, Pohang, Korea (Republic of [South] Korea);

Paper Id: 111_

16:00: [AdvancedMaterialsMonAM08]

Use of Green Biosurfactants and Nanomaterials for Mining Residue and Effluent Remediation

Catherine Mulligan¹ ; ¹Concordia University, Montreal, Canada;

Paper Id: 150_

08:15 AM - 10:30 PM [SUMMIT PLENARY](#)

10:30 AM Break

SESSION: **AdvancedMaterialsMonAM-R8**

Mon Oct, 23 2017

Session Chairs: Sandeep **Thakare**; Parvez **Alam**; Session Monitor: TBA

**Marquis International Symposium on
New and Advanced Materials and
Technologies for Energy, Environment
and Sustainable Development**

Room: **Maria Luisa & Maria Fernanda**

11:00: [AdvancedMaterialsMonAM01] Keynote

Biological Stick-slip Mechanisms: What Impact Does This Have on Materials Mechanics and Biomimetic Design?

Parvez Alam¹ ; Lilja Alam² ; ¹University of Edinburgh, Edinburgh, United Kingdom

(Great Britain); ²International Baccalaureate, Varissuo, Finland;

Paper Id: 227_

11:30: [AdvancedMaterialsMonAM02]

An Insight into the Driving Force of the σ Bond Cleavage on the Ge=O Bond of Germanone by the Combination of the Quantum Mechanical and Molecular Dynamics Methods

Toshiaki Matsubara¹ ; ¹Kanagawa University, Hiratsuka, Japan;

Paper Id: 222_

12:00: [AdvancedMaterialsMonAM03] Invited

Experimental Investigations on Electron Beam Welding of SAE 15B41 Steel

Sandeep Thakare¹ ; ¹Bharat forge limited, pune, India;

Paper Id: 211_

12:30: [AdvancedMaterialsMonAM04]

Predicting Glass-forming Ability in Bulk Metallic Alloys

Valeriy Sidorov¹ ; ¹Ural State Pedagogical University, Ekaterinburg, Russian Federation;

Paper Id: 219_

13:00 LUNCH

SESSION: **AdvancedMaterialsMonPM-R8**

Marquis International Symposium on New and Advanced Materials and Technologies for Energy, Environment and Sustainable Development

Mon Oct, 23 2017

Room: **Maria Luisa & Maria Fernanda**

Session Chairs: Demosthenes **Koutsogeorgis**; Tetiana **Prikhna**; Session

Monitor: TBA

14:30: [AdvancedMaterialsMonPM05] Keynote

Laser Processing of Thin Film Materials: A Versatile Tool for Controlling Materials' Characteristics.

Demosthenes Koutsogeorgis¹ ; ¹Nottingham Trent University, Nottingham, United Kingdom (Great Britain);

Paper Id: 356_

15:00: [AdvancedMaterialsMonAM06]

Hybrid - Fiber Reinforced Composites for Small Wind Energy Systems

Nikoloz Chikhradze¹ ; Fernand Marquis² ; Guram Abashidze³ ; ¹LEPL Grigol Tsulukidze Mining Institute/Georgian Technical University, Tbilisi, Georgia; ²San Diego State University, Department of Mechanical Engineering, San Diego, United States; ³G. Tsulukidze Mining Institute, Tbilisi, Georgia;

Paper Id: 58_

15:30: [AdvancedMaterialsMonAM07] Invited

New Technology for the Integrated Treatment of Industrial Waste Water Using Magnetic Nanopowders

Mykola Monastyrov¹ ; Tetiana Prikhna² ; Gennadiy Kochetov³ ; Petro Talanchuk¹ ; ¹Open International University of Human Development "Ukraine", Kiev, Ukraine; ²Institute for Superhard Materials of the National Academy of Sciences of Ukraine, Kiev, Ukraine; ³Kiev National University of Building and Construction, Kiev, Ukraine;

Paper Id: 324_

16:00: [AdvancedMaterialsMonAM08]

Biohydrogen Production from Wastes is Advanced Technology for Energy Economy

Armen Trchounian¹ ; ¹Yerevan State University, Yerevan, Armenia;

Paper Id: 220_

08:15 AM - 10:30 PM **SUMMIT PLENARY**

10:30 AM Break

SESSION: **SISAMMonAM-R9**

3rd Intl. Symp. Surfaces and Interfaces of Sustainable, Advanced Materials (SISAM)

Mon Oct, 23 2017

Room: **Condesa III**

Session Chairs: Jean-Marie **Dubois**; Isabelle **Braems**; Session Monitor: TBA

11:00: [SISAMMonAM01] Plenary

Multiscale Analysis of Advanced Materials' Tribological Properties

Richard Kouitat Njiwa¹ ; Philippe Stempfle² ; ¹Institut Jean Lamour (UMR 7198 CNRS-Universite de lorraine), Nancy, France; ²FEMTO St, Besancon, France;

Paper Id: 298_

11:30: [SISAMMonAM02] Keynote

Applications of the Proton Induced X-Ray Emission (Pixe) Technique for Elemental Analysis of Materials

Gregory Lapicki¹ ; ¹East Carolina University, Greenville, United States;

Paper Id: 120_

12:00: [SISAMMonAM03]

Muons as Optimal Probe for Future Solid-State Energy Devices

Ola Kenji Forslund¹ ; **Martin Mansson**¹ ; ¹KTH Royal Institute of Technology, Kista Stockholm, Sweden;

Paper Id: 342_

12:30: [SISAMMonAM04] Keynote

Role Of Nanocrystalline Structure For The Storage Kinetics Of Hydrogen Storage Materials: Surface Or Bulk Effect ?

Michael J. Zehetbauer¹ ; Jelena Horky² ; Gerhard Krexner¹ ; Peter Cengeri³ ; ¹University of Vienna, Faculty of Physics, Wien, Austria; ²Austrian Institute of Technology, Seibersdorf, Austria; ³Physics of Nanostructured Materials, Faculty of Physics, Univ. Vienna, Vienna, Austria;

Paper Id: 355_

13:00 LUNCH

14:30: [SISAMMonPM05] Plenary

Characterizing The Growth and Properties of Chalcogenide Semiconductors for Photovoltaic Applications

Angus Rockett¹ ; ¹Colorado School of Mines, Golden, United States;

Paper Id: 314_

15:00: [SISAMMonAM06] Keynote

High-efficiency Solar Cells Based on Polycrystalline Cu(In,Ga)Se₂ Thin Film: A Discussion on the Influence of Alkali Fluoride Post-deposition Treatments

Nicolas Barreau¹ ; Ludovic Arzel² ; Sylvie Harel² ; Thomas Lepetit² ; ¹Université $\frac{1}{2}$ de Nantes, IMN, Nantes, France; ²Université de Nantes, IMN, Nantes, France;

Paper Id: 315_

15:30: [SISAMMonAM07] Plenary

Grain Boundaries in Solar Cells and Their Influence on Electrical Characteristics

Pawel Zabierowski¹ ; ¹Warsaw University of Technology, Warsaw, Poland;

Paper Id: 353_

16:00: [SISAMMonAM08]

Thin-film Solar Cell Based on Cu_{1-x}Ga_xSe₂: The X-dependent Chemical Properties of the CuIn_{1-x}Ga_xSe₂ Interfaces

Isabelle Braems¹ ; Polyxeni Tsoulka² ; Nicolas Barreau³ ; ¹IMN-CNRS, Nantes Cedex, France; ²IMN, Nantes Cedex 3, France; ³Université $\frac{1}{2}$ de Nantes, IMN, Nantes, France;

Paper Id: 318_

Tuesday

08:15 AM - 10:30 PM SUMMIT PLENARY

10:30 AM Break

SESSION: **IronTueAM-R10**

5th Intl. Symp. on Advanced Sustainable Iron and Steel Making

Tue Oct, 24 2017

Room: **Maria Mercedes & Maria Beatriz**

Session Chairs: Jose Carlos **D Abreu**; Paulo **Von Kruger**; Session Monitor: TBA

11:00: [IronTueAM01] Keynote

[*Oxygen applications for sustainable steelmaking/steel melting*] **Self-Reducing Agglomerates: Metallization, Phase Morphologies and Carburization Kinetics**
Edelink Efrain Tinoco Falero¹ ; Jose Carlos D Abreu¹ ; Karla Ohler Martins² ; ¹PUC-Rio, Rio de Janeiro, Brazil; ²University of Applied Sciences Ruhr West, Mulheim, Germany (Deutschland);

Paper Id: 173_

11:30: [IronTueAM02]

The Approach of Industrial Ecology for Long Term Solutions for Industrial Wastes

Paulo Von Kruger¹ ; ¹MVK Consultoria e Treinamento, Belo Horizonte, Brazil;

Paper Id: 46_

12:00: [IronTueAM03]

Cleaning Process of the Coarse Steel Maker Sludge with Recovery of the Metallic Content and Consequent Carbon Sequestration

Erivelto Souza¹ ; Fernando Gabriel Silva Araujo² ; Cristovam Paes Oliveira³ ; Jose Emanuel Lopes Gomes³ ; ¹Universidade Federal de São João del-Rei, Ouro Branco, Brazil; ²UNIVERSIDADE FEDERAL DE OURO PRETO, Ouro Preto, Brazil; ³Fundacao Gorceix, Ouro Preto, Brazil;

Paper Id: 200_

12:30: [IronTueAM04]

Prediction Models of Strength and Productivity of Sinter using by Various Physicochemical Properties of Iron Ores

Young-cheol Yang¹ ; ¹POSCO, Pohang-si, Korea (Republic of [South] Korea);

Paper Id: 53_

13:00 LUNCH

SESSION: **MetalsTuePM-R10**

3rd Intl. Symp. on Sustainable Metals & Alloys Processing

Tue Oct, 24 2017

Room: **Maria Mercedes & Maria Beatriz**

Session Chairs: Aleksandre **Kandelaki**; Ashish **Dawari**; Session Monitor: TBA

14:30: [MetalsTuePM05] Invited

Investigation of Adiabatic Heat Rise and its Effect on Flow Stresses and Microstructural Changes During High Strain Rate Deformation of Ti6Al4V Alloy
Ashish Dawari¹ ; ¹Bharat Forge Limited, Kalyni centre for technology & innovation, Pune, India;

Paper Id: 329_

15:00: [MetalsTueAM06]

Pyrometallurgical Processing of Different Arsenic Materials and Wastes with Arsenic Output to Compact Nontoxic Product

Viktor Shumskiy¹ ; ¹VNIITsvetmet, Ust-Kamenogorsk, Kazakhstan;

Paper Id: 152_

15:30: [MetalsTueAM07]

Quality of the Refractory Lining Impact in the Longevity of the 45 KVA Electric Arc Furnace for Fe – Ni Production in Newco Ferronikeli, in Kosovo

Shefik Imeri¹ ; Naim Tahiraj² ; Florian Kongoli³ ; ¹MIM-GOLES, Prishtina, Kosovo; ²Newco Ferronikeli Complex, Prishtina, Kosovo; ³Flogen Technologies Inc., Mont-Royal, Canada;

Paper Id: 47_

16:00: [MetalsTueAM08]

Heat-Resistant and Refractory Alloys for Special Destination

Aleksandre Kandelaki¹ ; Omar Mikadze² ; George Mikadze² ; Zurab Mirijanashvili³ ; Vazha Garibashvili¹ ; ¹Ferdinand Tavadze Institute of Metallurgy and Materials Science, Tbilisi, Georgia; ²Georgian Technical University, Tbilisi, Georgia; ³Ferdinand Tavadze Institute of metallurgy and Materials Science, Tbilisi, Georgia;

Paper Id: 91_

08:15 AM - 10:30 PM **SUMMIT PLENARY**

10:30 AM Break

SESSION: **Non-ferrousTueAM-R1**

Barrios International Symposium on Sustainable Non-ferrous Smelting and Hydro/Electrochemical Processing

Tue Oct, 24 2017

Room: **Condesa II**

Session Chairs: Yoshiei **Kato**; Takahiko **Okura**; Session Monitor: TBA

11:00: [Non-ferrousTueAM01] Plenary

Some aspects and researches on sustaining Copper extraction processes

Takahiko Okura¹ ; ¹Ehime University, Kokubunji, Japan;

Paper Id: 285_

11:30: [Non-ferrousTueAM02]

[KIVCET] Recovery of Useful Non-Ferrous Elements in Crystalline Silicon Solar Cells by Chemical Etching

Yoshiei Kato¹ ; Md. Azhar Uddin¹ ; ¹Okayama University, Okayama, Japan;
Paper Id: 178_

12:00: [Non-ferrousTueAM03]

[KIVCET] Advanced Refractory Castables Based in Microsilica-gel Bonding System for Non-ferrous Industries

Margarita Alvarez¹ ; Ignacio Recio² ; **Rodolfo Santelli**³ ; Jose Maria Dominguez² ; ¹ALFRAN, Alcala de Guadaira, Spain; ²ALFRAN, ALCALA DE GUADAIRA, Spain; ³Refractarios Alfran, Santa Catarina, Mexico;
Paper Id: 94_

12:30: [Non-ferrousTueAM04] Keynote

Computational Thermodynamics Modeling of Oxygen Bottom Blown Copper Smelting Process

Qinmeng Wang¹ ; **Xueyi Guo**¹ ; ¹Central South University, Changsha, China;
Paper Id: 207_

13:00 LUNCH

SESSION: **Non-ferrousTuePM-R1**

Barrios International Symposium on Sustainable Non-ferrous Smelting and Hydro/Electrochemical Processing

Tue Oct, 24 2017

Room: **Condesa II**

Session Chairs: Juergen **Antrekowitsch**; Krishna **Parameswaran**; Session Monitor: TBA

14:30: [Non-ferrousTuePM05] Plenary

Mining and Sustainable Development: Oxymoron or RX for a Bright Future? An Update

Krishna Parameswaran¹ ; Manuel Ramos² ; ¹tfgMM Strategic Consulting, Scottsdale, United States; ²ASARCO LLC, Tucson, United States;
Paper Id: 105_

15:00: [Non-ferrousTueAM06] Keynote

21st Century Alchemy: Transitioning from Mining to Solar

Manuel Ramos¹ ; **Krishna Parameswaran**² ; ¹ASARCO LLC, Tucson, United States; ²tfgMM Strategic Consulting, Scottsdale, United States;
Paper Id: 186_

15:30: [Non-ferrousTueAM07] Plenary

New Ways of Utilizing Secondary Zinc Oxides in Zinc Production

Juergen Antrekowitsch¹ ; ¹Christian Doppler Laboratory for Optimization and Biomass Utilization in Heavy Metal Recycling, Leoben, Austria;
Paper Id: 166_

Furnace and Acid Tower Refractory Lining Integrity Monitoring by Acoustic Techniques

Afshin Sadri¹ ; Wai Lai Ying¹ ; ¹Hatch, Mississauga, Canada;

Paper Id: 203

08:15 AM - 10:30 PM SUMMIT PLENARY

10:30 AM Break

SESSION: **EnergyTueAM-R2**

Dodds International Symposium on Sustainable Energy Production

Tue Oct, 24 2017

Room: **Peninsula 3**

Session Chairs: Manfred **Mauntz**; Tamer **Turna**; Session Monitor: TBA

11:00: [EnergyTueAM01] Plenary

Evaluation of Subvention Schemes for Lignite Electricity Plants in the Aftermath of the Paris Agreement - 2015 - Part II

Tamer Turna¹; ¹YILDIRIM ENERGY INVESTMENTS INC, Maslak, Turkey;

Paper Id: 352

11:30: [EnergyTueAM02] Keynote

Condition Based Maintenance of Wind Turbines by 24/7 Monitoring of Oil Quality and Additive Consumption: Identification of Critical Operation Conditions &&&&&& Determination of the Next oil Change

Manfred Mauntz¹; Jorn Peuser¹; ¹cmc Instruments GmbH, Eschborn, Germany
(Deutschland);

Paper Id: 81

12:00: [EnergyTueAM03]

Thermodynamic Stability of Industrial Chemical Processes using Lyapunov Function Analysis

Vijay Tangde¹; Anil A. Bhalekar²; ¹Department of Chemistry, RTM Nagpur University, Nagpur, Nagpur, India; ²R. T. M. Nagpur University,, NAGPUR, India;

Paper Id: 263

12:30: [EnergyTueAM04]

Comparison of Supercritical Water Oxidation and Supercritical Water Gasification

William Jacoby¹ ; ¹University of Missouri Bioengineering, Columbia, United States;

Paper Id: 136

13:00 LUNCH

SESSION: **EnergyTuePM-R2**

Dodds International Symposium on Sustainable Energy Production

Tue Oct, 24 2017

Room: **Peninsula 3**

Session Chairs: Anil A. **Bhalekar**; Pearl **Mamanti Sealiete**; Session Monitor: TBA

14:30: [EnergyTuePM05] Plenary

Thermodynamic Stability of Irreversible Processes Based on Lyapunov Function Analysis

Anil A. Bhalekar¹ ; Vijay Tangde² ; ¹R. T. M. Nagpur University,, NAGPUR, India; ²Department of Chemistry, RTM Nagpur University, Nagpur, Nagpur, India; Paper Id: 145_

15:00: [EnergyTueAM06]

Minimizing Gas Flaring and Enhancing Condensate Recovery from Gas Condensate Reservoirs through Gas Injection

Pearl Mamanti Sealiete¹ ; ¹University of the Witwatersrand (WITS), Johannesburg, South Africa (zuid Afrika); Paper Id: 304_

15:30: [EnergyTueAM07]

The Effect of Alpha-Irradiation from Enriched Uranium on the Leaching Properties of PTFE

Jacoba Badenhorst¹ ; Henning Krieg² ; ¹Necsa, Pretoria, South Africa (zuid Afrika); ²North West University, Potchefstroom, South Africa (zuid Afrika); Paper Id: 240_

16:00: [EnergyTueAM08]

Analysis of Sustainable Electricity Generation System Inside a Directional Wellbore from Low-Enthalpy Geopressured Geothermal Brine Reservoir

Mayank Tyagi¹ ; Ildar Akhmadullin² ; ¹Louisiana State University, Baton Rouge, United States; ²Baton Rouge Community College, Baton Rouge, United States; Paper Id: 48_

08:15 AM - 10:30 PM **SUMMIT PLENARY**

10:30 AM Break

SESSION: **MoltenTueAM-R3**

Gaune-Escard International Symposium on Sustainable Molten Salt and Ionic Liquid Processing

Tue Oct, 24 2017

Room: **Peninsula 1**

Session Chairs: Rasmus **Fehrmann**; Ossama **Al-Juboori**; Session Monitor: TBA

11:00: [MoltenTueAM01] Plenary

Cleaning of Industrial Gases by Ionic Liquids

Rasmus Fehrmann¹ ; Anders Riisager¹ ; Susanne Mossin¹ ; Leonard Schill¹ ; Peter L. Thomassen¹ ; ¹DTU Chemistry, Lyngby, Denmark; Paper Id: 90_

11:30: [MoltenTueAM02]

Selective Extraction of Cu(II) by using a New Aqueous Biphasic Systems Based on Task Specific Ionic Liquids with Salicylate Anion

Tatjana Trtic Petrovic¹ ; Slobodan Gadzuric² ; Milan Vraneš² ; Aleksandra Dimitrijevic³ ; Jelena Djordjevic¹ ; Nikola Zdolsek³ ; Aleksandar Tot⁴ ; ¹Vinca Institute of Nuclear Sciences, Belgrade, Serbia and Montenegro (formerly Yugoslavia); ²Faculty of Sciences, University of Novi Sad, Novi Sad, Serbia and Montenegro (formerly Yugoslavia); ³Vinča Institute of Nuclear Sciences, University of Belgrade, Belgrade, Serbia and Montenegro (formerly Yugoslavia); ⁴Faculty of Sciences, University of Novi Sad, Department of Chemistry, Biochemistry and Environmental Protection, Novi Sad, Serbia and Montenegro (formerly Yugoslavia);
Paper Id: 175_

12:00: [MoltenTueAM03]

Co-Electrochemical Reduction of Carbon Dioxide and Steam to Hydrocarbons in Molten Carbonate

Ossama Al Juboori¹ ; George Chen² ; ¹The University of Nottingham, Nottingham, United Kingdom (Great Britain); ²University of Nottingham, Nottingham, United Kingdom (Great Britain);
Paper Id: 70_

12:30: [MoltenTueAM04]

The prespect of Al production with Inert Anode

Yihan Liu¹ ; ¹Northeastern University, Shenyang City, China;
Paper Id: 108_

13:00 LUNCH

SESSION: CoatingsTuePM-R3

4th Intl. Symp. on Sustainable Surface and Interface Engineering: Coatings for Extreme Environments

Tue Oct, 24 2017

Room: **Peninsula 1**

Session Chairs: Pawel **Rokicki**; Sachin **Patil**; Session Monitor: TBA

14:30: [CoatingsTuePM05] Invited

Effect of Laser Peening on Fatigue and Wear Performance of Hot Work Tool Steel

Sachin Patil¹ ; ¹Bharat forge ltd,pune, PUNE, India;
Paper Id: 212_

15:00: [CoatingsTueAM06]

SiO₂ + Y₂O₃ Thermal Barrier Coatings On Ceramic Substrates

Pawel Rokicki¹ ; Marek Goral¹ ; Willy Kunz² ; Markus Loeffler³ ; Andre Clausner² ; Slawomir Kotowski⁴ ; Andrzej Nowotnik⁴ ; Ehrenfried Zschech⁵ ; Elzbieta Bak¹ ; ¹Rzeszow University of Technology, Research and Development Laboratory for Aerospace Materials, Rzeszow, Poland; ²Fraunhofer-Institut für Keramische Technologien und Systeme IKTS, Dresden, Germany (Deutschland); ³Technische Universität Dresden, Dresden, Germany (Deutschland); ⁴Rzeszow University of Technology, Rzeszow, Poland; ⁵Fraunhofer Institute for Ceramic Technologies and Systems IKTS, Dresden, Germany (Deutschland);
Paper Id: 338_

15:30: [CoatingsTueAM07]

Enhancing Absorption of Solar Cell Thin-film Materials by Excitation of Plasmon Resonances in Noble-metal Nanoparticles; Example of Perovskites

Krystyna Kolwas¹ ; Anastasiya Derkachova² ; ¹Institute of Physics, Polish Academy of Sciences, Warsaw, Poland; ²Institute of Physics, Polish Academy of Sciences, Warszawa, Poland;
Paper Id: 260_

08:15 AM - 10:30 PM [SUMMIT PLENARY](#)

10:30 AM Break

SESSION: BatteryTueAM-R4

4th Intl. Symp. on Sustainable

Secondary Battery Manufacturing and Recycling

Tue Oct, 24 2017

Room: **Peninsula 4**

Session Chairs: Tetsuya **Yamada**; Katsuya **Teshima**; Session Monitor: TBA

11:00: [BatteryTueAM01] Invited

Flux growth of submicron, polyhedron LiCoO₂ single crystals and their Li+ transportation nature at high electrochemical load

Tetsuya Yamada¹ ; Nobuyuki Zettsu² ; **Katsuya Teshima**³ ; ¹Center for Energy & Environmental Science, Shinshu University, Nagano, Japan; ²Shinshu University, Nagano, Japan; ³Center for Energy & Environmental Science, Department of Materials Chemistry, Shinshu University, Nagano, Japan;
Paper Id: 340_

11:30: [BatteryTueAM02] Invited

Energy Density Limitation of Lithium-Sulfur Batteries

Chao Shen¹ ; Jianxin Xie¹ ; Mei Zhang² ; Petru Andrei¹ ; **Jim Zheng**² ; ¹Florida State University, Tallahassee, United States; ²Florida State University, Tallahassee, United States;
Paper Id: 343_

12:00: [BatteryTueAM03] Invited

Flux growth concept as new approaches to highly crystalline materials: A challenge for next-generation energy devices

Katsuya Teshima¹ ; ¹Center for Energy & Environmental Science, Department of Materials Chemistry, Shinshu University, Nagano, Japan;

Paper Id: 339_

12:30: [BatteryTueAM04] Invited

Limiting fracture by fabricating nano-porous Si electrodes

Katerina Aifantis¹ ; ¹Univ of Florida, Gainesville, United States;

Paper Id: 371

SESSION: MineralTueAM-R5

Lotter International Symposium on Sustainable Mineral Processing

Tue Oct, 24 2017

Room: **Peninsula 2**

Session Chairs: Emile **Scheepers**; Andrej **IvaniÄ**; Session Monitor: TBA

11:00: [MineralTueAM01] Keynote

A Future with Engineering Stone Made from Silica-Rich Iron Ore Tailings from Vale

Emile Scheepers¹ ; Alexandre Salomao De Andrade² ; Carlos Gontijo De F.³ ; ¹Vale SA, Etoy, Switzerland (Confederation of Helvetia); ²Vale SA, Belo Horizonte, Brazil; ³Vale Institute of Technology, Ouro Preto, Brazil;

Paper Id: 100_

11:30: [MineralTueAM02]

The Problem of Layer in the Tubes for the Vertical Transportation of Fly-Ash in the Stanterg Mine

Bajram Mustafa¹ ; Shyqri Kelmendi² ; Bekim Bajraktari³ ; Faton Kelmendi⁴ ; ¹Trepca Min.& Metall. Company;University of Prishtina, Mitrovica, Kosovo; ²Faculty of Geosciences and technology, Pristine University, Mitrovica, Kosovo; ³Trepca J.S.C., Mitrovica, Kosovo; ⁴Kosovo Government, Prishtina, Kosovo;

Paper Id: 177_

12:00: [MineralTueAM03]

Recovery Optimization in Mixed Gold Minerals at Cerro Corona Mine - Goldfields La Cima

Mireylly Araujo¹ ; ¹Goldfields, Lima, Peru;

Paper Id: 155_

12:30: [MineralTueAM04] Invited

Experimental Study on Bond Properties between Hemp Fiber and Cement Mortar

Andrej IvaniÄ¹ ; Sebastian Toplak² ; Samo Lubej² ; ¹University of Maribor, Maribor, Slovenia; ²Faculty of civil engineering, transportational engineering and architecture, University of Maribor, Maribor, Slovenia;

Paper Id: 271_

13:00 LUNCH

08:15 AM - 10:30 PM SUMMIT PLENARY

10:30 AM Break

SESSION: AdvancedMaterialsTueAM-R6

**Marquis International Symposium on
New and Advanced Materials and
Technologies for Energy, Environment
and Sustainable Development**

Tue Oct, 24 2017

Room: **Condesa IA**

Session Chairs: Yail Jimmy Kim; Sandra E. Rodil; Session Monitor: TBA

11:00: [AdvancedMaterialsTueAM01] Keynote

Sustainable Development of Advanced Composite Materials for Infrastructure Rehabilitation

Yail Jimmy Kim¹ ; ¹University of Colorado Denver, Denver, United States;

Paper Id: 126_

11:30: [AdvancedMaterialsTueAM02] Keynote

Bioactive Amorphous Metal Oxide Nanocoatings

Sandra E. Rodil¹ ; Phaedra Silva Bermudez² ; Argelia Almaguer Flores³ ; Rene Olivares Navarrete⁴ ; ¹Instituto de Investigaciones en Materiales, Universidad nacional Autónoma de México, COYOACAN, Mexico; ²Instituto Nacional de Rehabilitación, Ciudad de México, Mexico; ³Facultad de Odontología, División de Estudios de Posgrado e Investigación, Universidad Nacional Autónoma de México, Ciudad de México, Mexico; ⁴Department of Biomedical Engineering, Virginia Commonwealth University, Richmond, United States;

Paper Id: 169_

12:00: [AdvancedMaterialsTueAM03] Invited

Two Stage Pyrolysis/Gasification of Solid Waste for Tar Free High Hydrogen Content Syngas Production

Juma Haydary¹ ; Patrik Šuhaj² ; ¹Institute of Chemical and Environmental Engineering, Slovak University of Technology, Bratislava, Slovakia (Slovak Republic); ²Department of Chemical and Environmental Engineering, Slovak University of Technology, Bratislava, Slovakia (Slovak Republic);

Paper Id: 275_

12:30: [AdvancedMaterialsTueAM04] Invited

The Properties and Microstructure Evolution of Cast Austenite Stainless Steel under Thermal Aging

Fei Xue¹ ; Xiao Jin¹ ; Xiangbing Liu¹ ; Xitao Wang² ; ¹Suzhou Nuclear Power Research Institute, Suzhou, China; ²University of Science and Technology Beijing, Beijing, China;

Paper Id: 142_

13:00 LUNCH

SESSION: **AdvancedMaterialsTuePM-R6**

**Marquis International Symposium on
New and Advanced Materials and
Technologies for Energy, Environment
and Sustainable Development**

Tue Oct, 24 2017

Room: **Condessa IB**

Session Chairs: Zhenhai **Xia**; Takumi **Chikada**; Session Monitor: TBA

14:30: [AdvancedMaterialsTuePM05] Keynote

Bioinspired Micromanipulation Design based on Gecko Self-cleaning

Yiyang Wan¹ ; Zhenhai Xia¹ ; ¹University of North Texas, Denton, United States;

Paper Id: 214_

15:00: [AdvancedMaterialsTueAM06] Keynote

Potential of smart coating for advanced energy systems

Takumi Chikada¹ ; ¹Shizuoka University, Shizuoka, Japan;

Paper Id: 228_

15:30: [AdvancedMaterialsTueAM07] Invited

**Research and Development of Continuous Casting Process of Ni-based
Corrosion Resistant Alloy with Compound Electromagnetic Fields**

Engang Wang¹ ; ¹Northeastern University, Shenyang, China;

Paper Id: 293_

16:00: [AdvancedMaterialsTueAM08]

**Process of Chemical Stabilization and Mechanical Improvement of Slag through
CO2 Capture**

Erivelto Souza¹ ; Orimar Reis² ; Higor Coelho³ ; Leandro Duarte³ ; Tales Oliveira³ ;
Denise Pereira⁴ ; Walinton Sousa³ ; Reimar Lourenco⁵ ; ¹Universidade Federal de
Siçi½o Joĩ½o Del-Rei, Ouro Branco, Brazil; ²Instituto Federal de Minas Gerais, Ouro
Preto, Brazil; ³Universidade Federal de Sao Joao Del-Rei, Ouro Branco,
Brazil; ⁴UNIPAC - Conselheiro Lafaiete, Conselheiro Lafaiete, Brazil; ⁵Federal
University of Sao Joao Del-Rei, Ouro Branco, Brazil;

Paper Id: 115_

08:15 AM - 10:30 PM **SUMMIT PLENARY**

10:30 AM Break

SESSION: **AdvancedMaterialsTueAM-R7**

**Marquis International Symposium on
New and Advanced Materials and
Technologies for Energy, Environment
and Sustainable Development**

Tue Oct, 24 2017

Room: **Condessa IB**

Session Chairs: Yoshitaka **Matsukawa**; Lasse **Rosendahl**; Session Monitor: TBA

11:00: [AdvancedMaterialsTueAM01] Keynote

Hydrothermal Liquefaction of Biomass as Sustainable Pathways to Fuels and Chemicals

Lasse Rosendahl¹ ; Thomas Pedersen¹ ; Saqib Toor¹ ; ¹Aalborg University, Aalborg East, Denmark;

Paper Id: 336_

11:30: [AdvancedMaterialsTueAM02] Keynote

FTIR Spectroscopy for Characterization of Surface Properties of Disperse Materials

Alexey Tsyganenko¹ ; ¹St.Petersburg State University, St. Petersburg, Russian Federation;

Paper Id: 252_

12:00: [AdvancedMaterialsTueAM03] Keynote

Recent progress on the theory of precipitation hardening in nuclear materials research

Yoshitaka Matsukawa¹ ; ¹Tohoku University, Sendai, Japan;

Paper Id: 262_

12:30: [AdvancedMaterialsTueAM04] Keynote

Sustainable Composite Structural Systems Incorporating Nature and Waste-based Materials

Togay Ozbakkaloglu¹ ; ¹, Adelaide, Australia;

Paper Id: 216_

13:00 LUNCH

SESSION: **AdvancedMaterialsTuePM-R7**

Tue Oct, 24 2017

Session Chairs: Yasmine **Sassa**; Ephraim **Eliav**; Session Monitor: TBA

**Marquis International Symposium on
New and Advanced Materials and
Technologies for Energy, Environment
and Sustainable Development**

Room: **Condesa IB**

14:30: [AdvancedMaterialsTuePM05] Keynote

Electronic structure and energy spectra of relativistic quantum dots

Ephraim Eliav¹ ; ¹School of Chemistry, Tel Aviv University, Tel Aviv, Israel;

Paper Id: 276_

15:00: [AdvancedMaterialsTueAM06] Keynote

Carbon Capture and Sequestration and the Future of Power: From Basic Research to Commercial Plants

Amr Henni¹ ; ¹University of Regina, Regina, Canada;

Paper Id: 286_

15:30: [AdvancedMaterialsTueAM07] Invited

Novel two-dimensional graphene-like systems based on silicon allotropes

Yasmine Sassa¹ ; ¹Uppsala University, Uppsala, Sweden;

Paper Id: 284_

16:00: [AdvancedMaterialsTueAM08] Keynote

Plasmon Hybridization for Multiplex Nanosensing of Environmental Pollutants

Rina Singh¹ ; ¹CSIR-Central Road Research Institute, NEW DELHI, India;

Paper Id: 241_

08:15 AM - 10:30 PM [**SUMMIT PLENARY**](#)

10:30 AM Break

SESSION: **AdvancedMaterialsTueAM-R8**

**Marquis International Symposium on
New and Advanced Materials and
Technologies for Energy, Environment
and Sustainable Development**

Tue Oct, 24 2017

Room: **Maria Luisa & Maria Fernanda**

Session Chairs: Nikoloz **Chikhradze**; Guolong **Tan**; Session Monitor: TBA

11:00: [AdvancedMaterialsTueAM01]

Synthesis and Mechanical Alloying of Ti-Al-B-C Powders

Mikheil Chikhradze¹ ; **Fernand Marquis**² ; **Nikoloz Chikhradze**³ ; ¹Georgian Technical University, Tbilisi, Georgia; ²San Diego State University, Department of Mechanical Engineering, San Diego, United States; ³LEPL Grigol Tsulukidze Mining Institute/Georgian Technical University, Tbilisi, Georgia;

Paper Id: 74_

11:30: [AdvancedMaterialsTueAM02] Keynote

Physically Fabricated Semiconductor Nanocrystals for Light Harvesting

Guolong Tan¹ ; Qishu Xu¹ ; Limin Liu¹ ; ¹Institute of New Materials, Wuhan University of Technology, Wuhan, China;

Paper Id: 246_

12:00: [AdvancedMaterialsTueAM03]

Meso-Scale Time-resolved Sensing of Shock-Compression Effects in Heterogeneous Materials

Naresh Thadhani¹ ; ¹Georgia Institute of Technology, Atlanta, United States;

Paper Id: 32_

12:30: [AdvancedMaterialsTueAM04]

Products of Activation of Hydrolytic Lignin: Prospects of Application

Yury Nikolenko¹ ; ¹Institute of Chemistry FEB RAS, Vladivostok, Russian Federation;

Paper Id: 264_

13:00 LUNCH

SESSION: **AdvancedMaterialsTuePM-R8**

**Marquis International Symposium on
New and Advanced Materials and
Technologies for Energy, Environment
and Sustainable Development**

Tue Oct, 24 2017

Room: **Maria Luisa & Maria Fernanda**

Session Chairs: Chengjia **Shang**; Muhammad **Ghauri**; Session Monitor: TBA

14:30: [AdvancedMaterialsTuePM05] Keynote

The State-of-the Art of Long Distance Gas Pipeline in China

Chengjia Shang¹ ; ¹University of Science and Technology Beijing, Beijing, China;

Paper Id: 196_

15:00: [AdvancedMaterialsTueAM06] Keynote

Biodesulfurization of Coal - An Eco-Friendly Approach

Muhammad Ghauri¹ ; Nasrin Akhtar¹ ; Kalsoom Akhtar¹ ; ¹NIBGE, Faisalabad, Pakistan;

Paper Id: 208_

15:30: [AdvancedMaterialsTueAM07]

Investigation of Ultrasonic Solvent Extracts for the Separation of Neutral Lipids from Microalgae Biomass for Biodiesel Potential

Amrajit Singh Sarpal¹ ; ¹INMETRO, XEREM, Brazil;

Paper Id: 223_

16:00: [AdvancedMaterialsTueAM08]

Towards the Development of a Reactive Filter from Green Resource for Groundwater Defluoridation

Brigitte Helmreich¹ ; **Nurudeen Abiola Oladoja**² ; Hakeem Bello² ; ¹Chair of Urban Water Systems Engineering, Munich, Germany (Deutschland); ²Hydrochemistry Laboratory, Department of Chemical Sciences, Akungba, Nigeria;

Paper Id: 234_

08:15 AM - 10:30 PM **SUMMIT PLENARY**

10:30 AM Break

SESSION: **SISAMTueAM-R9**

**3rd Intl. Symp. Surfaces and Interfaces of
Sustainable, Advanced Materials (SISAM)**

Tue Oct, 24 2017

Room: **Condesa III**

Session Chairs: Daniel **Kropman**; Brice **Gautier**; Session Monitor: TBA

11:00: [SISAMTueAM01] Plenary

Assessing Ferroelectricity at the Nanoscale Using Techniques Derived from Atomic Force Microscopy

Brice Gautier¹ ; Simon Martin¹ ; David Albertini¹ ; Nicolas Baboux¹ ; ¹Institut des Nanotechnologies de Lyon / INSA de Lyon, VILLEURBANNE, France;

Paper Id: 239_

11:30: [SISAMTueAM02]

Stresses Relaxation in the Si-SiO₂ System and its Influence on the Interface Properties

Daniel Kropman¹ ; Viktor Seeman² ; Artur Medvids³ ; ¹Tallinn University, Tallinn, Estonia; ²Tartu University, Tartu, Estonia; ³Riga Teknikal University, Riga, Latvia;
Paper Id: 221_

12:00: [SISAMTueAM03]

Light to Hydrogen Processes and Relative Phenomena in the Transition Metal Oxides and Silver and Cuprous Halides

Alexander Gavriluk¹ ; ¹Ioffe Physical Technical Institute of the Russian Academy of Sciences, Saint-Petersburg, Russian Federation;
Paper Id: 224_

12:30: [SISAMTueAM04] Invited

Physical Properties of Highly Effective New Generation Catalysts Based on Intermetallic Compounds

Magdalena Wencka¹ ; ¹Institute of Molecular Physics, Polish Academy of Sciences, Poznan, Poland;
Paper Id: 273_

13:00 LUNCH

SESSION: **SISAMTuePM-R9**

3rd Intl. Symp. Surfaces and Interfaces of Sustainable, Advanced Materials (SISAM)

Tue Oct, 24 2017

Room: **Condesa III**

Session Chairs: Spomenka **Kobe**; Christian **Teichert**; Session Monitor: TBA

14:30: [SISAMTuePM05] Plenary

Interfaces of Organic Semiconductor Molecules with Two-dimensional Materials

Christian Teichert¹ ; ¹Montanuniversitaet Leoben, Leoben, Austria;
Paper Id: 334_

15:00: [SISAMTueAM06] Invited

The Interface Analyses of Heavy Rare Earth Doped Spark Plasma Sintered Melt Spun Ribbons

Spomenka Kobe¹ ; Kristina Zagar² ; Marko Soderznik² ; Barbara Novosel³ ; Rafal Dunin Borkowski⁴ ; Andras Kovacs⁵ ; Martial Duchamp⁶ ; ¹Josef Stefan Institute, Ljubljana, Slovenia; ²Jozef Stefan Institute, Ljubljana, Slovenia; ³Faculty of Chemistry and Chemical Technology, Ljubljana, Slovenia; ⁴Forschungszentrum Jülich, Jülich, Germany (Deutschland); ⁵Ernst Ruska-Centre for Microscopy and Spectroscopy with Electrons, Juelich, Germany (Deutschland); ⁶Ernst Ruska-Centre for Microscopy and Spectroscopy with Electrons, School of Materials Science and Engineering Nanyang Technological University, Singapore, Singapore, Singapore;
Paper Id: 261_

15:30: [SISAMTueAM07]

Synthesis and characterization of dandelion-like ZnS with high antibacterial activity

Zhoucheng Wang¹ ; ¹Xiamen University, Xiamen, China;

Paper Id: 289_

16:00: [SISAMTueAM08]

Closing Remarks

Jean-marie Dubois¹ ; ¹Institut Jean Lamour, Nancy, France;

Paper Id: 368_

Wednesday

08:15 AM - 10:30 PM [SUMMIT PLENARY](#)

10:30 AM Break

SESSION: **MetalsWedAM-R10**

3rd Intl. Symp. on Sustainable Metals & Alloys Processing

Wed Oct, 25 2017

Room: **Maria Mercedes & Maria Beatriz**

Session Chairs: Vera **Vorob'eva**; Ranjit **Dalwatkar**; Session Monitor: TBA

11:00: [MetalsWedAM01]

Three-Dimensional Computer Models as a Tool for Verification of Phase Diagrams

Vera Vorob'eva¹ ; Vasily Lutsyk¹ ; Maria Parfenova² ; ¹Institute of Physical Materials Science SB RAS, Ulan-Ude, Russian Federation; ²Tomsk State University of Control Systems and Radio-electronics, Tomsk, Russian Federation;

Paper Id: 80_

11:30: [MetalsWedAM02]

Effect of Austempering Temperature and Time on Mechanical Properties of SAE 9260 Steel

Ranjit Dalwatkar¹ ; ¹Bharat Forge Ltd, Pune India., Pune, India;

Paper Id: 309_

SESSION: **AdvancedMaterialsWedPM-R10**

Marquis International Symposium on New and Advanced Materials and Technologies for Energy, Environment and Sustainable Development

Wed Oct, 25 2017

Room: **Maria Mercedes & Maria Beatriz**

Session Chairs: Burcak **Ebin**; Varvara **Karagkiozaki**; Session Monitor: TBA

14:30: [AdvancedMaterialsWedPM05] Plenary

Nanomedicine Targeting Atherosclerosis

Varvara Karagkiozaki¹ ; ¹Aristotle University of Thessaloniki, Greece, Thessaloniki, Greece;

Paper Id: 171_

15:00: [AdvancedMaterialsWedAM06]

A Pyrometallurgical Process to Recover the Zinc and Manganese from Spent Batteries

Burcak Ebin¹ ; Martina Petranikova¹ ; Britt-marie Steenari¹ ; Christian Ekberg¹ ; ¹Chalmers University of Technology, Gothenburg, Sweden;

Paper Id: 68_

15:30: [AdvancedMaterialsWedAM07]

Low Temperature Technology Receiving Nano Scale Metal Oxides

Zurab Kushitashvili¹ ; Amiran Bibilashvili² ; ¹LEPL Micro and Nanoelectronics Institute, Rustavi, Georgia; ²LEPL Micro and Nanoelectronics Institute, Tbilisi, Georgia; Paper Id: 64_

16:00: [AdvancedMaterialsWedAM08]

Direct Laser Cladding an Emerging Technique for Development of Component

Jyotsna Dutta Majumdar¹ ; ¹Indian Institute of Technology Kharagpur, Kharagpur, India; Paper Id: 282_

08:15 AM - 10:30 PM **SUMMIT PLENARY**

10:30 AM Break

SESSION: **Non-ferrousWedAM-R1**

Barrios International Symposium on Sustainable Non-ferrous Smelting and Hydro/Electrochemical Processing

Wed Oct, 25 2017

Room: **Condesa II**

Session Chairs: Christoph **Sagadin**; Elaine **Felipe**; Session Monitor: TBA

11:00: [Non-ferrousWedAM01]

Recovery of Rare Earth Elements from Acid Mine Drainage by Ion Exchange

Elaine Felipe¹ ; Gabriel Silva¹ ; Bruna Vidigal¹ ; Ana Claudia Ladeira¹ ; ¹Centro de Desenvolvimento da Tecnologia Nuclear, Belo Horizonte, Brazil; Paper Id: 198_

11:30: [Non-ferrousWedAM02]

Recovery of Rare Earth Elements by Co-precipitation with Iron, Aluminum and Manganese (Hydr)oxides from Acid Mine Drainage Waters

Mateus Lanna Borges De Moraes¹ ; Ana Flavia Marinho Saraiva² ; Ana Claudia Ladeira² ; ¹Comissão Nacional de Energia Nuclear, Belo Horizonte, Brazil; ²Centro de Desenvolvimento da Tecnologia Nuclear, Belo Horizonte, Brazil; Paper Id: 302_

12:00: [Non-ferrousWedAM03]

Extraction and Separation of Thorium from Monizite Leach Liquor

Chul Joo Kim¹ ; **Ho-sung Yoon**² ; **Kyeong Woo Chung**³ ; ¹KOREA INSTITUTE OF GEOSCIENCE AND MINERAL RESOURCES (KIGAM), Daejeon, Korea (Republic of [South] Korea); ²Korea Institute of Geoscience and Mineral Resources, Daejeon, Korea (Republic of [South] Korea); ³Korea Institute of Geoscience and Mineral resources, Daejeon, Korea (Republic of [South] Korea); Paper Id: 49_

12:30: [Non-ferrousWedAM04]

Determination of the High-melting Behaviour of Synthetic Ferronickel Slags

Christoph Sagadin¹ ; Stefan Luidold² ; Christoph Wagner³ ; Alfred

Spanring⁴ ; ¹Montanuniversitaet Leoben CDL-TM, Leoben,

Austria; ²Montanuniversitaet Leoben, Leoben, Austria; ³RHI AG-Nonferrous Metals,

Vienna, Austria; ⁴RHI AG, Vienna, Austria;

Paper Id: 52_

13:00 LUNCH

08:15 AM - 10:30 PM [SUMMIT PLENARY](#)

10:30 AM Break

SESSION: **EnergyWedAM-R2**

Dodds International Symposium on Sustainable Energy Production

Wed Oct, 25 2017

Room: **Peninsula 3**

Session Chairs: Sonja **Stefanov**; William **Jacoby**; Session Monitor: TBA

11:00: [EnergyWedAM01]

Models for Assessing the Creation of Landfill Pollutants (LFG)

Sonja Stefanov¹ ; ¹, Novi Sad, Serbia and Montenegro (formerly Yugoslavia);

Paper Id: 158_

11:30: [EnergyWedAM02]

Measuring Quantities of Flared Gas in Middle East

Irene Mabafokeng Masitha¹ ; ¹University of the Witwatersrand (WITS), Johannesburg, South Africa (zuid Afrika);

Paper Id: 305_

12:00: [EnergyWedAM03]

High-Pressure, Density-Driven Separation of Carbon Dioxide from Flue Gas

William Jacoby¹ ; ¹University of Missouri Bioengineering, Columbia, United States;

Paper Id: 137_

12:30: [EnergyWedAM04] Keynote

Investigation of Carbonated Water Injection in an Oil Reservoir to Enhance Oil Recovery

Abdollah Esmaeili¹ ; ¹National Iranian South Oil Company (NISOC) - National Iranian Oil Company (NIOC), Omiodieh, Iran (Islamic Republic of Iran);

Paper Id: 13_

13:00 LUNCH

SESSION: **EnergyWedPM-R2**

Dodds International Symposium on Sustainable Energy Production

Wed Oct, 25 2017

Room: **Peninsula 3**

Session Chairs: Abdollah **Esmaeili**; Session Monitor: TBA

14:30: [EnergyWedPM05]

Increasing Efficiency of Gas Injection into Gas Cap of a Sandstone Oil Reservoir to Improve Oil Recovery

Abdollah Esmaeili¹ ; ¹National Iranian South Oil Company (NISOC) - National Iranian Oil Company (NIOC), Omiodieh, Iran (Islamic Republic of Iran);

Paper Id: 14_

15:00: [EnergyWedAM06]

Experimental Investigation of Different Immiscible Water Alternating Gas (IWAG) Schemes towards Optimization of Displacement Efficiency

Abdollah Esmaeili¹ ; Mohammad Abdalla Ayoub² ; ¹National Iranian South Oil Company (NISOC) - National Iranian Oil Company (NIOC), Omiodieh, Iran (Islamic Republic of Iran); ²Universiti Teknologi PETRONAS (UTP), Malaysia, Malaysia;

Paper Id: 15_

15:30: [EnergyWedAM07]

Polymer Gel Design, Production and Injection into Oil Producing Interval of a Sandstone Reservoir to Prevent Extra Produced Water

Abdollah Esmaeili¹ ; ¹National Iranian South Oil Company (NISOC) - National Iranian Oil Company (NIOC), Omiodieh, Iran (Islamic Republic of Iran);

Paper Id: 16_

16:00: [EnergyWedAM08]

Proposing New Technological Solutions for Produced Water Management in an Oil Field

Abdollah Esmaeili¹ ; ¹National Iranian South Oil Company (NISOC) - National Iranian Oil Company (NIOC), Omiodieh, Iran (Islamic Republic of Iran);

Paper Id: 17_

08:15 AM - 10:30 PM **SUMMIT PLENARY**

10:30 AM Break

SESSION: **MathematicsWedAM-R3**

2nd Intl. Symp. on Sustainable Mathematics Applications

Wed Oct, 25 2017

Room: **Peninsula 1**

Session Chairs: Peter **Rowlands**; Qingguo **Wang**; Session Monitor: TBA

11:00: [MathematicsWedAM01] Plenary

Human Heart Beat Simulation based on Fluid-Structure Interaction

Dean Vucinic¹ ; ¹Vesalius College, Vrije Universiteit Brussel, Brussels, Belgium;

Paper Id: 346_

11:30: [MathematicsWedAM02]

The Holographic Principle

Peter Rowlands¹ ; ¹University of Liverpool, Liverpool, United Kingdom (Great Britain);
Paper Id: 122_

12:00: [MathematicsWedAM03]

Performance Enhancement for Active Disturbance Rejection Control

Zhuoyun Nie¹ ; Yijing Ma² ; **Qingguo Wang**³ ; Ruijuan Liu⁴ ; ¹, Xiamen, China; ²School of Information Science and Engineering, National Huaqiao University, Xiamen 361021, China, Xiamen, China; ³Institute for Intelligent Systems, the University of Johannesburg, 2146, South Africa, Johannesburg, South Africa (zuid Afrika); ⁴School of Applied Mathematics, Xiamen University of Technology, Xiamen 361024, P. R. China., Xiamen, China;
Paper Id: 92_

12:30: [MathematicsWedAM04]

Model Reference Compensation of Rate-dependent Hysteresis Nonlinearity for Piezoelectric Actuator

Zhuoyun Nie¹ ; **Qingguo Wang**² ; Yijing Ma³ ; Ruijuan Liu⁴ ; ¹, Xiamen, China; ²Institute for Intelligent Systems, the University of Johannesburg, 2146, South Africa, Johannesburg, South Africa (zuid Afrika); ³School of Information Science and Engineering, National Huaqiao University, Xiamen 361021, China, Xiamen, China; ⁴School of Applied Mathematics, Xiamen University of Technology, Xiamen 361024, P. R. China., Xiamen, China;
Paper Id: 93_

13:00 LUNCH

SESSION: **MathematicsWedPM-R3**

2nd Intl. Symp. on Sustainable Mathematics Applications

Wed Oct, 25 2017

Room: **Peninsula 1**

Session Chairs: Zbigniew **Oziewicz**; Valeriy **Dvoeglazov**; Session Monitor: TBA

14:30: [MathematicsWedPM05]

The Feynman-Dyson Propagators for Neutral Particles (Local or Non-local?)

Valeriy Dvoeglazov¹ ; ¹Universidad de Zacatecas, Zacatecas, Mexico;
Paper Id: 35_

15:00: [MathematicsWedAM06]

On the Negative-Energy 4-Spinors and Masses in the Dirac Equation

Valeriy Dvoeglazov¹ ; ¹Universidad de Zacatecas, Zacatecas, Mexico;
Paper Id: 36_

15:30: [MathematicsWedAM07]

Planetary Radar Astronomy must be Based on Compton's Phenomena of Conservation of Energy-Momenta

Zbigniew Oziewicz¹ ; ¹Universidad Nacional Autonoma de Mexico, Facultad de Estudios Superiores, Cuautitlan Izcalli, Mexico;

Paper Id: 96_

08:15 AM - 10:30 PM **SUMMIT PLENARY**

10:30 AM Break

SESSION: **RecyclingWedAM-R4**

5th Intl. Symp. on Sustainable Materials Recycling Processes and Products

Wed Oct, 25 2017

Room: **Peninsula 4**

Session Chairs: Teodora **Retegan**; Christoph **Sorger**; Session Monitor: TBA

11:00: [RecyclingWedAM01] Plenary

Thermodynamic and Kinetic Investigations of Leaching Calcined By-products of EAF Dust Waelz Process in Sodium Hydroxide Solutions

Pavel Kozlov¹ ; A. Panshin² ; Sergey Yakornov³ ; Sergey

Mamyachenkov⁴ ; ¹Chelyabinsk Zinc Plant, Chelyabinsk, Russian Federation; ²LLC

"UMMC-Holding", Verkhnyaya Pyshma, Russian Federation; ³LLC "UMMC-Holding",

Verkhnya Pyshma, Russian Federation; ⁴UMMC Technical University, Verkhnya

Pyshma, Russian Federation;

Paper Id: 129_

11:30: [RecyclingWedAM02]

[Solid and liquid wastes from industrial processes: Innovations in material recovery and environmental protection] **Separation of REEs from Fluorescent Lamp Waste Fractions**

Teodora Retegan¹ ; Cristian Tunsu¹ ; ¹Chalmers University of Technology, Gothenburg, Sweden;

Paper Id: 69_

12:00: [RecyclingWedAM03]

Pyrometallurgical Processing and Slag Analysis of Waste Electrical and Electronic Equipment

Christoph Sorger¹ ; Stefan Luidold² ; ¹, Leoben, Austria; ²Montanuniversitaet Leoben, Leoben, Austria;

Paper Id: 59_

12:30: [RecyclingWedAM04]

[Solid and liquid wastes from industrial processes: Innovations in material recovery and environmental protection] **ACCEL Project by JST Program for Gas Separation by PCPs/MOFs**

Takaiku Yamamoto¹ ; ¹Kyoto Unoversity, Osaka, Japan;

Paper Id: 33_

SESSION: **RecyclingWedPM-R4**

5th Intl. Symp. on Sustainable Materials Recycling Processes and Products

Wed Oct, 25 2017

Room: **Peninsula 4**

Session Chairs: Juergen **Antrekowitsch**; Stefan **Wegscheider**; Session Monitor: TBA

14:30: [RecyclingWedPM05]

Recycling of Jarosite and Electric Arc Furnace Dust in a Metal Bath Process to Recover Valuable Metals

Stefan Wegscheider¹ ; Juergen Antrekowitsch² ; Stefan Steinlechner¹ ; ¹Chair of Nonferrous Metallurgy, Leoben, Austria; ²Christian Doppler Laboratory for Optimization and Biomass Utilization in Heavy Metal Recycling, Leoben, Austria;
Paper Id: 57_

15:00: [RecyclingWedAM06]

[Solid and liquid wastes from industrial processes: Innovations in material recovery and environmental protection] **Sustainable Technologies to Save Energy and Reduce Emissions in Metal Recycling Processes**

Rocky(zhong-ling) Wei¹ ; Joachim Von Schöele² ; ¹Allpication Technology APAC, The Linde Group, Shanghai, China; ²The Linde Group, Shanghai, China;
Paper Id: 153_

15:30: [RecyclingWedAM07]

[Solid and liquid wastes from industrial processes: Innovations in material recovery and environmental protection] **Pilot Scale Tests for Recycling of Photovoltaic Panels by Physical and Chemical Treatment**

Francesca Pagnanelli¹ ; Pietro Altimari² ; Emanuela Moscardini³ ; Luigi Toro² ; Thomas Abo Atia² ; ¹Sapienza University of Rome, Rome, Italy; ²Sapienza University, Rome, Italy; ³Universita , Roma, Italy;
Paper Id: 331_

16:00: [RecyclingWedAM08]

Impact of the Ferronickel Slag in Improvement of the Construction Materials Properties

Izet Ibrahim¹ ; Musa Rizaj² ; Nurten Deva³ ; Florian Kongoli⁴ ; Edward Z. Obrien⁵ ; ¹UMIB, Mitrovica, Mitrovica, Albania; ²University of Prishtina, Prishtina, Kosovo; ³Public University of Mitrovica - Isa Boletini - , Faculty of Geosciences, Republic of Kosovo, Mitrovica, Kosovo; ⁴Flogen Technologies Inc., Mont-Royal, Canada; ⁵FLOGEN TECHNOLOGIES INC, Wilmington, United States;
Paper Id: 193_

SESSION: **EnvironmentalWedAM-R5**

6th Intl. Symp. on Environmental, Health, Policy, Legal, Management and Social Issues Related to Metals, Materials and Mineral Processing

Wed Oct, 25 2017

Room: **Peninsula 2**

Session Chairs: Ifije **Ohiomah**; Omeje **Maxwell**; Session Monitor: TBA

11:00: [EnvironmentalWedAM01]

Lean Manufacturing: A Case Study with Kanban System Implementation in Small and Medium Enterprise Manufacturing Companies in Nigeria

Ifije Ohiomah¹ ; Clinton Aigbavboa¹ ; ¹University of Johannesburg, Johannesburg, South Africa (zuid Afrika);

Paper Id: 12_

11:30: [EnvironmentalWedAM02] Keynote

Determination of 238U, 232Th and 40K in Selected Borehole Rock Samples in Abuja, Nigeria, using Neutron Activation Analysis and its Radiological Risk on Drillers

Omeje Maxwell¹ ; ¹Covenant University, Ota, Nigeria;

Paper Id: 209_

12:00: [EnvironmentalWedAM03]

Radioactivity due to Major Xxide Compositions in Lithological Sequence Rocks of Abuja, North Central Nigeria

Omeje Maxwell¹ ; ¹Covenant University, Ota, Nigeria;

Paper Id: 210_

12:30: [EnvironmentalWedAM04]

Supply Chain Risk and Resilience: A Practical Perspective

Mahour Parast¹ ; ¹NC A&T State Unirsity, Greensboro, United States;

Paper Id: 350_

13:00 LUNCH

SESSION: **EnvironmentalWedPM-R5**

6th Intl. Symp. on Environmental, Health, Policy, Legal, Management and Social Issues Related to Metals, Materials and Mineral Processing

Wed Oct, 25 2017

Room: **Peninsula 2**

Session Chairs: Flavio **Aristone**; Mahour **Parast**; Session Monitor: TBA

14:30: [EnvironmentalWedPM05] Keynote

Technological Innovation in Industrial Bio-Materials

Mahour Parast¹ ; ¹NC A&T State Unirsity, Greensboro, United States;

Paper Id: 349_

15:00: [EnvironmentalWedAM06]

Transforming Potential in Reality: The Case of Brazilian Macaw Palm

Flavio Aristone¹ ; ¹UFMS, Campo Grande, MS - Brazil, Brazil;

Paper Id: 232_

08:15 AM - 10:30 PM **SUMMIT PLENARY**

10:30 AM Break

SESSION: **AdvancedMaterialsWedAM-R6**

**Marquis International Symposium on
New and Advanced Materials and
Technologies for Energy, Environment
and Sustainable Development**

Wed Oct, 25 2017

Room: **Condesa IA**

Session Chairs: Qizhen Li; Kunichi Miyazawa; Session Monitor: TBA

11:00: [AdvancedMaterialsWedAM01] Keynote

Characterization of Inhomogeneous Microstructure of Ultrafine Grained Magnesium

Qizhen Li¹ ; ¹Washington State University, Pullman, United States;

Paper Id: 154_

11:30: [AdvancedMaterialsWedAM02] Keynote

Multifunctional Chromogenic Sensors Enabled by Novel Multi-Stimuli-Responsive Shape Memory Polymers

Peng Jiang¹ ; ¹University of Florida, Gainesville, United States;

Paper Id: 199_

12:00: [AdvancedMaterialsWedAM03]

High-Resolution Transmission Electron Microscopy Characterization of Hexagonal C60 Fullerene Nanowhiskers

Kunichi Miyazawa¹ ; Yumi Tanaka¹ ; Yoshihiro Nemoto² ; Takatsugu Wakahara² ; Konno Toshio² ; ¹Tokyo University of Science, Tokyo, Japan; ²National Institute for Materials Science, Tsukuba, Japan;

Paper Id: 174_

12:30: [AdvancedMaterialsWedAM04] Keynote

Isolation and Functionalization of Nanocellulose from Lignocellulosic Fibres for Environmental Remediation and Sensor Applications

Chin Hua Chia¹ ; ¹Universiti Kebangsaan Malaysia, BANGI, Malaysia;

Paper Id: 151_

13:00 LUNCH

SESSION: **AdvancedMaterialsWedPM-R6**

**Marquis International Symposium on
New and Advanced Materials and
Technologies for Energy, Environment
and Sustainable Development**

Wed Oct, 25 2017

Room: **Condesa IA**

Session Chairs: Hassane **Oudadesse**; Thorsten **Kluener**; Session Monitor: TBA

14:30: [AdvancedMaterialsWedPM05]

Synthetic Bone Biomaterial: Physicochemical and Biological Investigations

Hassane Oudadesse¹ ; S Mosbahi² ; S Jebahi³ ; A. Lucas Giro² ; H. Elfeki³ ; A. Elfeki³ ; G. Cathelineau² ; ¹University of rennes 1, Rennes, France; ²University of Rennes 1, Rennes, France; ³University of Sfax, Sfax, Tunisia;

Paper Id: 190_

15:00: [AdvancedMaterialsWedAM06] Keynote

Photochemical Water Splitting: A Quantum Perspective from First Principles

Thorsten Kluener¹ ; ¹University of Oldenburg, Oldenburg, Germany (Deutschland);

Paper Id: 205_

15:30: [AdvancedMaterialsWedAM07]

Hybrid Bio-Composite Glass-Chitosan Used for Applications in Biomedical Field

Hassane Oudadesse¹ ; S Mosbahi² ; S Jebahi³ ; H. Elfeki³ ; A. Elfeki³ ; H.

Keskes³ ; ¹University of rennes 1, Rennes, France; ²University of Rennes 1, Rennes, France; ³University of Sfax, Sfax, Tunisia;

Paper Id: 191_

16:00: [AdvancedMaterialsWedAM08] Keynote

Development of Primary Coolant Piping for AP1000 Pressurized Water Reactor

Xitao Wang¹ ; Fei Xue² ; ¹University of Science and Technology Beijing, Beijing, China; ²Suzhou Nuclear Power Research Institute, Suzhou, China;

Paper Id: 127_

08:15 AM - 10:30 PM [**SUMMIT PLENARY**](#)

10:30 AM Break

SESSION: **AdvancedMaterialsWedAM-R7**

**Marquis International Symposium on
New and Advanced Materials and
Technologies for Energy, Environment
and Sustainable Development**

Wed Oct, 25 2017

Room: **Condesa IB**

Session Chairs: Amr **Henni**; William **Proud**; Session Monitor: TBA

11:00: [AdvancedMaterialsWedAM01] Keynote

Microwave Damage and Processing of Cementitious and Geological Materials

William Proud¹ ; Gareth Tear² ; ¹Imperial College London, London, United Kingdom (Great Britain); ²Institute of Shock Physics, London, United Kingdom (Great Britain);

Paper Id: 335_

11:30: [AdvancedMaterialsWedAM02]

Dynamic Impact Factor During Test of Cylindrical Shape Sample Under Shock Load

Levan Japaridze¹ ; **Nikoloz Chikhradze**² ; **Fernand Marquis**³ ; ¹LEPL Grigol Tsulukidze Mining Institute, Tbilisi, Georgia; ²LEPL Grigol Tsulukidze Mining Institute/Georgian Technical University, Tbilisi, Georgia; ³San Diego State University, Department of Mechanical Engineering, San Diego, United States;
Paper Id: 66_

12:00: [AdvancedMaterialsWedAM03]

Mesoporous Silica Impregnated with Acetate-based Ionic Liquids for CO₂/N₂ Separation

Amr Henni¹ ; Hussameldin Ibrahim¹ ; Mohammed Mohamedali¹ ; ¹University of Regina, Regina, Canada;
Paper Id: 287_

12:30: [AdvancedMaterialsWedAM04]

Liquid Phase Shock Assisted Synthesis and Consolidation of Nanostructured W-Ag and Ta-Ag Composites

Akaki Peikrishvili¹ ; Bagrat Godibadze² ; Grigor Mamniashvili³ ; Elguja Chagelishvili² ; ¹F. Tavadze Institute of Metallurgy and Materials Science, Tbilisi, Georgia; ²Tsulukidze Mining Institute, Tbilisi, Georgia; ³Javakhishvili Tbilisi State University, Tbilisi, Georgia;
Paper Id: 168_

13:00 LUNCH

SESSION: **AdvancedMaterialsWedPM-R7**

Wed Oct, 25 2017

Session Chairs: **Fernand Marquis**; **Tetiana Prikhna**; Session Monitor: TBA

**Marquis International Symposium on
New and Advanced Materials and
Technologies for Energy, Environment
and Sustainable Development**

Room: **Condesa IB**

14:30: [AdvancedMaterialsWedPM05] Keynote

The Main Stages of Development of Thermoelectricity in Ilia Vekua Sukhumi Institute of Physics and Technology

Guram Bokuchava¹ ; **Fernand Marquis**² ; Boris Shirokov³ ; Karlo Barbakadze⁴ ; Giorgi Darsavelidze⁵ ; ¹Ilia Vekua Sukhumi Institute of Physics and Technology, Tbilisi, Georgia; ²San Diego State University, Department of Mechanical Engineering, San Diego, United States; ³National Science Center "Kharkiv Institute of Physics and Technology, Kharkiv, Ukraine; ⁴Ilia Vekua Sukhumi Institute of Physics and Technology, Tbilisi123, Georgia; ⁵, Tbilisi, Georgia;
Paper Id: 148_

15:00: [AdvancedMaterialsWedAM06] Invited

Lightweight Ti,Nb-Al-C MAX Phases-based Materials and Their Stability in Oxidizing Environment at Elevated Temperatures

Tetiana Prikhna¹ ; Vladimir Sverdun¹ ; Orest Ostash² ; Andriy Ivasyshyn² ; Myroslav Karpets¹ ; Thierry Cabioch³ ; Lucyna Jaworska⁴ ; Patrick Chartier³ ; Viktor Moshchil¹ ; Jolanta Cyboron⁴ ; Tetiana Zimych¹ ; Alexandra Starostina¹ ; Pawel Figiel⁵ ; ¹Institute for Superhard Materials of the National Academy of Sciences of Ukraine, Kiev, Ukraine; ²Karpenko Physical-Mechanical Institute of the National Academy of Sciences of Ukraine, Lviv, Ukraine; ³Universite de Poitiers, CNRS/Laboratoire PHMAT, Chasseneuil Futuroscope Cedex, France; ⁴The Institute of Advanced Manufacturing Technology, Krakow, Poland; ⁵Ins, Krakow, Poland;
Paper Id: 323_

15:30: [AdvancedMaterialsWedAM07] Keynote

Limiting fracture by fabricating nano-porous Si electrodes

Katerina Aifantis¹ ; ¹Univ of Florida, Gainesville, United States;
Paper Id: 372_ [\[Abstract\]](#)

16:00: [AdvancedMaterialsWedAM08] Keynote

Manganese Oxide Nanomaterials for the Oxygen Reduction Reaction in Alkaline Electrolyte

Timothy Lambert¹ ; ¹Sandia National Laboratories, Albuquerque, United States;
Paper Id: 351_

08:15 AM - 10:30 PM [SUMMIT PLENARY](#)

10:30 AM Break

SESSION: **AdvancedMaterialsWedAM-R8**

Wed Oct, 25 2017

[Session Chairs:](#) Dipankar **Ghosh**; Pengwan **Chen**; [Session Monitor:](#) TBA

**Marquis International Symposium on
New and Advanced Materials and
Technologies for Energy, Environment
and Sustainable Development**

Room: **Maria Luisa & Maria Fernanda**

11:00: [AdvancedMaterialsWedAM01] Keynote

Can Small Molecules Realize Big Dreams in Solar Energy Conversion for Sustainable Environment?

Chandrasekharam Malapaka¹ ; ¹CSIR-Indian Institute of Chemical Technology, Hyderabad, Hyderabad, India;
Paper Id: 243_

11:30: [AdvancedMaterialsWedAM02] Keynote

Shock-wave induced synthesis of graphene sheets

Pengwan Chen¹ ; ¹Beijing Institute of Technology, Beijing, China;
Paper Id: 327_

12:00: [AdvancedMaterialsWedAM03]

Ice-templated Ceramics and Composites: Understanding Structure-Property Relationships in the Quasistatic and Dynamic Regimes of Compressive Loading

Dipankar Ghosh¹ ; Mahesh Banda¹ ; Hyungsuk Kang¹ ; Sashanka Akurati¹ ; Valere Kamaha¹ ; ¹Old Dominion University, Norfolk, United States;

Paper Id: 244_

12:30: [AdvancedMaterialsWedAM04] Invited

Modeling and simulation for the mechanical properties of carbon nanotubes under various external forces

Keka Talukdar¹ ; ¹Nadiha High school, Durgapur, India;

Paper Id: 278_

13:00 LUNCH

SESSION: **AdvancedMaterialsWedPM-R8**

Marquis International Symposium on New and Advanced Materials and Technologies for Energy, Environment and Sustainable Development

Wed Oct, 25 2017

Room: **Maria Luisa & Maria Fernanda**

Session Chairs: Mamata **Lanjewar**; Li **Yao**; Session Monitor: TBA

14:30: [AdvancedMaterialsWedPM05]

Combustion Properties of N-Butanol, Methane and their mixtures in the Low Speed Two-Stroke Internal Combustion Engine

Li Yao¹ ; Yang Ding² ; Ligu Song² ; Rui Zhao³ ; Wenwen Xia² ; Yifan Liu² ; Lianzhong Huang² ; ¹Dalian Maritime University, Dalian, China; ²Marine Engineering College, Dalian Maritime University, Dalian, China; ³Marine Engineering College, Dalian Maritime University,, Dalian, China;

Paper Id: 255_

15:00: [AdvancedMaterialsWedAM06] Keynote

Implantable Medical Devices: Technologies, Trends and Future Scope

Vipan Kakkar¹ ; ¹Shri Mata Vaishno Devi University, Katra. Reasi, India;

Paper Id: 259_

15:30: [AdvancedMaterialsWedAM07]

PVD Deposition of Multilayered Nanocoatings With Potential Antimicrobial Behaviour

Anka Trajkovska Petkoska¹ ; Anita Trajkovska Broach² ; Ilija Nasov³ ; Toshiyuki Kanazawa⁴ ; ¹Assoc. Prof., Veles, Macedonia (Former Yugoslav Republic of Macedonia); ²materials scientist, Christiansburg, United States; ³CEO PLasma, Skopje, Macedonia (Former Yugoslav Republic of Macedonia); ⁴JEOL (EUROPE) SAS, 78290 Croissy-sur-Seine, France;

Paper Id: 258_

16:00: [AdvancedMaterialsWedAM08]

Synthesis and Characterization of Copper Nanoparticle, Copper-Urea Formaldehyde and Copper Oxide Urea Formaldehyde Nanocomposite and Their Application for Adsorption of Heavy Metals from Water

Mamata Lanjewar¹ ; Ratnakar Lanjewar² ; ¹Department of Chemistry, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur, India; ²Department of Chemistry, Dharampeth M.P.Deo Memorial Science College, Nagpur, Nagpur, India;
Paper Id: 61_

08:15 AM - 10:30 PM [SUMMIT PLENARY](#)

10:30 AM Break

SESSION: CompositeWedAM-R9

5th Intl. Symp. on Composite, Ceramic and Nano Materials Processing, Characterization and Applications

Wed Oct, 25 2017

Room: **Condesa III**

Session Chairs: Fumio **Ogawa**; Kamlesh **Phapale**; Session Monitor: TBA

11:00: [CompositeWedAM01] Invited

Characterization in Drilling Process of Carbon Fiber Reinforced Plastic Composite Materials

Kamlesh Phapale¹ ; ¹Bharat Forge Ltd., Pune, India;
Paper Id: 215_

11:30: [CompositeWedAM02]

Sintering of ZrB₂-based Ceramic Composites Prepared by HP, SPS, HP-HT Sintering Techniques

Annamaria Naughton Duszova¹ ; Elzbieta Baczek¹ ; Aleksandra Dubiel¹ ; Marcin Podsiadlo¹ ; Paweł Rutkowski² ; ¹The Institute of Advanced Manufacturing Technology, Krakow, Poland; ²AGH University of Science and Technology, Krakow, Poland;
Paper Id: 312_

12:00: [CompositeWedAM03]

Carbon Nanotube-Reinforced Aluminum Matrix Composites Fabricated by Hot Extrusion of Ball-milled Powders Encapsulated in Aluminum Containers

Fumio Ogawa¹ ; Chitoshi Masuda² ; ¹Ritsumeikan University, Kusatsu, Japan; ²Kagami Memorial Institute for Materials Science and Technology, Waseda University, Shinjuku-ku, Japan;
Paper Id: 229_

12:30: [CompositeWedAM04]

Diamond-Like Carbon Coatings: Synthesis, Properties, and Applications

Indrit Vozga¹ ; Jorgaq Kacani² ; ¹, Tirana, Albania; ²Universiteti Politeknik Tirane, Tirane, Albania;
Paper Id: 114_

SESSION: **CompositeWedPM-R9**

5th Intl. Symp. on Composite, Ceramic and Nano Materials Processing, Characterization and Applications

Wed Oct, 25 2017

Room: **Condesa III**

Session Chairs: **Adriana Medina Ramirez**; **Beatriz Ruiz Camacho**; Session Monitor: TBA

14:30: [CompositeWedPM05]

Smart Core-shell Nanocontainers with Kaolinite For Improved Corrosion Protection of Zinc

Kamelia Kamburova¹ ; Neli Boshkova² ; **Nikolai Boshkov**¹ ; Tsetska Radeva¹ ; ¹Institute of Physical Chemistry, Bulgarian Academy of Sciences, Sofia, Bulgaria; ²Institute of Physical Chemistry, Bulgarian Academy of sciences, Sofia, Bulgaria;
Paper Id: 230_

15:00: [CompositeWedAM06]

Deposition of Metals on Vapor Grown Carbon Fibers via in-situ Chemical Vapor Deposition and Fabrication of Metal Matrix Composites Utilizing Coated Fibers

Fumio Ogawa¹ ; Chitoshi Masuda² ; Hidetoshi Fujii³ ; ¹Ritsumeikan University, Kusatsu, Japan; ²Kagami Memorial Institute for Materials Science and Technology, Waseda University, Shinjuku-ku, Japan; ³Joining and Welding Research Institute, Osaka University, Ibaraki, Japan;
Paper Id: 238_

15:30: [CompositeWedAM07]

Synthesis and Characterization of Zeolite Membranes on Zirconia and Calcium Silicate Substrates

Adriana Medina Ramirez¹ ; Gabriela Maricela Gonzalez Vega² ; Georgina Garcia³ ; **Beatriz Ruiz Camacho**⁴ ; ¹Universidad de Guanajuato, Campus Guanajuato, Guanajuato, Mexico; ²University of La Cienega, sahuayo de morelos, Mexico; ³University of La Cienega, Sahuayo, Mexico; ⁴Universidad de Guanajuato, Guanajuato, Mexico;
Paper Id: 75_

16:00: [CompositeWedAM08]

[Boron-related materials, preparation, structure and application] **The Effect of Alkali Concentration on the Structural and Magnetic Properties of Mn-Ferrite Nanoparticles Prepared via the Coprecipitation Method**

Somayah Pourbafarani¹ ; ¹Isfahan university, Tehran, Iran (Islamic Republic of Iran);
Paper Id: 256_

Thursday

08:15 AM - 10:30 PM [SUMMIT PLENARY](#)

10:30 AM Break

SESSION: **AdvancedMaterialsThuAM-R10**

Marquis International Symposium on New and Advanced Materials and Technologies for Energy, Environment and Sustainable Development

Thu Oct, 26 2017

Room: **Maria Mercedes & Maria Beatriz**

Session Chairs: Rui **Vilar**; Hideki **Koyanaka**; Session Monitor: TBA

11:00: [AdvancedMaterialsThuAM01] Keynote

Ultrafast Laser Surface Nanostructuring: Surface Topography, Texture Formation Mechanisms, Surface Properties and engineering applications

Vitor Oliveira¹ ; Rui Vilar² ; ¹Instituto Superior de Engenharia de Lisboa, Lisbon, Portugal; ²Instituto Superior Tecnico, Lisboa, Portugal;

Paper Id: 104_

11:30: [AdvancedMaterialsThuAM02]

Effect of Crystal Structure in Manganese Dioxide for Water Purification

Hideki Koyanaka¹ ; ¹Forward Science Laboratory Ltd., Oita, Japan;

Paper Id: 291_

12:00: [AdvancedMaterialsThuAM03]

Non-Pt based Nanoparticles as Low Cost, Highly Efficient and Robust Catalysts Alternative to Pt in Fuel Cell Applications

Sebastian Chirambatte Peter¹ ; ¹Jawaharlal Nehru Centre for Advanced Scientific Research, Bengaluru, India;

Paper Id: 292_

12:30: [AdvancedMaterialsThuAM04]

BH3CN Anion-based Hypergolic Hydrophobic Ionic Liquids

Vikas K Bhosale¹ ; ¹Defence Institute of Advanced Technology, Pune, India;

Paper Id: 306_

13:00 LUNCH

SESSION: **AdvancedMaterialsThuPM-R10**

Marquis International Symposium on New and Advanced Materials and Technologies for Energy, Environment and Sustainable Development

Thu Oct, 26 2017

Room: **Maria Mercedes & Maria Beatriz**

Session Chairs: Artem **Lunev**; Indranil **Manna**; Session Monitor: TBA

14:30: [AdvancedMaterialsThuPM05] Invited

Laser Assisted Surface Engineering for Enhanced Wear, Corrosion and Oxidation Resistance in Metallic Alloys

Indranil Manna¹ ; ¹Indian Institute of Technology Kanpur, Kanpur, India;
Paper Id: 283_

15:00: [AdvancedMaterialsThuAM06] Invited

Current Progress in Computer Simulation of Dislocation Plasticity in Uranium Dioxide

Artem Lunev¹ ; **Sergei Starikov**² ; **Alexei Kuksin**² ; **Vasily Tsepilyaev**² ; ¹Joint Institute for High Temperatures of the Russian Academy of Sciences (JIHT RAS), Moscow, Russian Federation; ²JIHT RAS, MIPT, Moscow, Russian Federation;
Paper Id: 250_

12:30: [Non-ferrousThuAM04]

The Use of Rare Earth Elements as Agricultural Enhancers

Antonio Zamunér Filho¹ ; ¹Federal University of Goiás, Catalão, Brazil;
Paper Id: 38_

13:00 LUNCH

SESSION: **Non-ferrousThuPM-R1**

Barrios International Symposium on Sustainable Non-ferrous Smelting and Hydro/Electrochemical Processing

Thu Oct, 26 2017

Room: **Condesa II**

Session Chairs: **Zhi Wang**; **Shuyang Yan**; Session Monitor: TBA

14:30: [Non-ferrousThuPM05]

Two-step Copper Smelting Process at Dongying Fangyuan

Zhi Wang¹ ; ¹DONGYING FANGYUAN NONFERROUS METALS CO., LTD., Dongying, China;
Paper Id: 213_

15:00: [Non-ferrousThuAM06]

Study on Temperature Distribution of Copper Smelting Process by Oxygen Bottom Blowing

Shuyang Yan¹ ; ¹Central South University, hunan changsha, China;
Paper Id: 301_

15:30: [Non-ferrousThuAM07]

Crystallization Paths for System MgO-SiO₂-Al₂O₃

Vasily Lutsyk¹ ; **Anna Zelenaya**¹ ; ¹Institute of Physical Materials Science SB RAS, Ulan-Ude, Russian Federation;
Paper Id: 63_

16:00: [Non-ferrousThuAM08]

Peculiarities of Phase Formation at Metallothermal Interactions in the System Aluminum-zirconium and Silicon Oxides

Sergey Krasikov¹ ; ¹Institute of Metallurgy of Ural Branch of the Russian Academy of Sciences, Ekaterinburg, Russian Federation;

Paper Id: 265_

08:15 AM - 10:30 PM [**SUMMIT PLENARY**](#)

10:30 AM Break

SESSION: **EnergyThuAM-R2**

Dodds International Symposium on Sustainable Energy Production

Thu Oct, 26 2017

Room: **Peninsula 3**

Session Chairs: Abdollah **Esmaeili**; Session Monitor: TBA

11:00: [EnergyThuAM01]

Scale up Heterogeneity and Recovery Performance from Core to Field Scale for an Oil Sandstone Reservoir

Abdollah Esmaeili¹ ; ¹National Iranian South Oil Company (NISOC) - National Iranian Oil Company (NIOC), Omiodieh, Iran (Islamic Republic of Iran);

Paper Id: 18_

08:15 AM - 10:30 PM [**SUMMIT PLENARY**](#)

10:30 AM Break

SESSION: **MultiscaleThuAM-R3**

4th Intl. symp. on Multiscale Material Mechanics and Multiphysics and Sustainable Applications

Thu Oct, 26 2017

Room: **Peninsula 1**

Session Chairs: K.Y. **Xu**; Mei **Zhang**; Session Monitor: TBA

11:00: [MultiscaleThuAM01] Invited

Nanocarbon Foams: Fabrication, Characterization, and Application

Mei Zhang¹ ; ¹Florida State University, Tallahassee, United States;

Paper Id: 313_

11:30: [MultiscaleThuAM02]

[Gradient Elasticity] Surface Stresses on the Size-dependent Behaviors of a Microplate

K.y. Xu¹ ; Yanmei Yue² ; ¹Shanghai University, Shanghai, China; ²Shanghai Universtiy, Shanghai, China;

Paper Id: 37_

08:15 AM - 10:30 PM [SUMMIT PLENARY](#)

10:30 AM Break

SESSION: **RecyclingThuAM-R4**

5th Intl. Symp. on Sustainable Materials Recycling Processes and Products

Thu Oct, 26 2017

Room: **Peninsula 4**

Session Chairs: Francesca **Pagnanelli**; Rajendra **Patil**; Session Monitor: TBA

11:00: [RecyclingThuAM01]

[*Solid and liquid wastes from industrial processes: Innovations in material recovery and environmental protection*] **Recycling of Lithium Ion Batteries: Mechanical and Hydrometallurgical Treatment Towards Zero-waste**

Emanuela Moscardini¹ ; Pietro Altimari² ; Luigi Toro² ; Thomas Abo Atia² ; **Francesca Pagnanelli**³ ; ¹Universita , Roma, Italy; ²Sapienza University, Rome, Italy; ³Sapienza University of Rome, Rome, Italy;

Paper Id: 330_

11:30: [RecyclingThuAM02]

Water/Iron Powder as a Hydrogen Source in Olefin Hydrogenation

Rajendra Patil¹ ; Yoel Sasson² ; ¹Sandip University, Nashik, Maharashtra, India, Nashik, India; ²Hebrew University, Jerusalem, Israel, Jerusalem, Israel;

Paper Id: 235_

08:15 AM - 10:30 PM [SUMMIT PLENARY](#)

10:30 AM Break

SESSION: **AdvancedMaterialsThuAM-R6**

Marquis International Symposium on New and Advanced Materials and Technologies for Energy, Environment and Sustainable Development

Thu Oct, 26 2017

Room: **Condesa IA**

Session Chairs: Nikoloz **Chikhradze**; Fernando **Castro**; Session Monitor: TBA

11:00: [AdvancedMaterialsThuAM01] Keynote

Advances in Hybrid Characterization of Nanoscaled Energy Materials and Printed Electronics

Fernando Castro¹ ; ¹National Physical Laboratory (NPL), Teddington, United Kingdom (Great Britain);

Paper Id: 185_

11:30: [AdvancedMaterialsThuAM02]

Advantages, Challenges and Opportunities of Wind Power Systems

Fernand Marquis¹ ; **Nikoloz Chikhradze**² ; **A.g. Mamalis**³ ; ¹San Diego State University, Department of Mechanical Engineering, San Diego, United States; ²LEPL Grigol Tsulukidze Mining Institute/Georgian Technical University, Tbilisi, Georgia; ³Demokritos National Center for Scientific Research, Athens, Greece; Paper Id: 82_

12:00: [AdvancedMaterialsThuAM03]

HRTEM Characterization of Platinum Nanoparticles Deposited on Various Novel Nanocarbons using Coaxial Arc Plasma Deposition and Nanocarbon Supports

Kunichi Miyazawa¹ ; **Masaru Yoshitake**¹ ; **Yumi Tanaka**¹ ; ¹Tokyo University of Science, Tokyo, Japan; Paper Id: 160_

12:30: [AdvancedMaterialsThuAM04] Invited

Radiation Hardening of Molybdenum by Argon Ion Implantation

Anzor Guldamashvili¹ ; **Yuri Nardaya**¹ ; **Tsira Nebieridze**¹ ; **Ekaterine Sanaia**² ; **Avtandil Sichinava**² ; **Marina Kadarua**¹ ; ¹Ilia Vekua Sukhumi Institute of Physics and Technology, Tbilisi, Georgia; ², Tbilisi, Georgia; Paper Id: 138_

13:00 LUNCH

SESSION: AdvancedMaterialsThuPM-R6		Marquis International Symposium on New and Advanced Materials and Technologies for Energy, Environment and Sustainable Development
Thu Oct, 26 2017		
Room: Condesa IA		
<u>Session Chairs:</u> Junrong Zheng ; Abdeen Omer ; <u>Session Monitor:</u> TBA		

14:30: [AdvancedMaterialsThuPM05] Keynote

Electron/Hole Transformation between Two Atomic Layers

Junrong Zheng¹ ; ¹Peking University, Beijing, China; Paper Id: 195_

15:00: [AdvancedMaterialsThuAM06] Invited

Progress in Green Energies, Sustainable Development, and the Environment

Abdeen Omer¹ ; ¹Energy Research Institute, Nottingham, United Kingdom (Great Britain); Paper Id: 242_

08:15 AM - 10:30 PM **SUMMIT PLENARY**

10:30 AM Break

SESSION: **AdvancedMaterialsThuAM-R7**

**Marquis International Symposium on
New and Advanced Materials and
Technologies for Energy, Environment
and Sustainable Development**

Thu Oct, 26 2017

Room: **Condesa IB**

Session Chairs: Ryuichi **Tomoshige**; A.G. **Mamalis**; Session Monitor: TBA

11:00: [AdvancedMaterialsThuAM01] Keynote

Trends and Developments in Advanced Manufacturing from Macro- to Nanoscale
A.g. Mamalis¹ ; ¹Demokritos National Center for Scientific Research, Athens, Greece;

Paper Id: 133_

11:30: [AdvancedMaterialsThuAM02] Invited

Lightweight Ceramics Based on Aluminum Dodecaboride (AIB12)

Tetiana Prikhna¹ ; Pavlo Barvitskiy¹ ; Sergey Dub¹ ; Vladislav Domnich² ; Myroslav Karpets¹ ; ¹Institute for Superhard Materials of the National Academy of Sciences of Ukraine, Kiev, Ukraine; ²Department of Materials Science and Engineering, Rutgers, The State University of New Jersey, Piscataway, United States;

Paper Id: 322_

12:00: [AdvancedMaterialsThuAM03]

Hot Explosive Welding of Non-oxide Ceramic-metal Multilayer Composites

Ryuichi Tomoshige¹ ; Seiichiro Ii² ; Yasuhiro Morizono³ ; ¹Sojo University, Kumamoto, Japan; ²National Institute for Materials Science (NIMS), Tsukuba, Japan; ³Kumamoto University, Kumamoto, Japan;

Paper Id: 83_

12:30: [AdvancedMaterialsThuAM04] Invited

II-VI Semiconductor Thin Films CdZnTe Ternary Compound for Energy Applications

Nazar Abbas Shah¹ ; ¹COMSATS Institute of Information Technology (CIIT), Islamabad, Pakistan;

Paper Id: 217_

13:00 LUNCH

SESSION: **AdvancedMaterialsThuPM-R7**

**Marquis International Symposium on
New and Advanced Materials and
Technologies for Energy, Environment
and Sustainable Development**

Thu Oct, 26 2017

Room: **Condesa IB**

Session Chairs: Hani **Elsayed-Ali**; Sivakumar **Manickam**; Session Monitor: TBA

14:30: [AdvancedMaterialsThuPM05] Keynote

**Cavitation – A Cleaner, Greener, Energy-efficient and Sustainable Processing
Technique for Nanomaterials of Wider Technological Applications**

Sivakumar Manickam¹ ; ¹UNIVERSITY OF NOTTINGHAM, KUALA LUMPUR,
Malaysia;

Paper Id: 225_

15:00: [AdvancedMaterialsThuAM06] Keynote

Multicharged Ion Sources for Implantation and Deposition

Hani Elsayed Ali¹ ; ¹Old Dominion University, Norfolk, United States;

Paper Id: 106_

08:15 AM - 10:30 PM **SUMMIT PLENARY**

10:30 AM Break

SESSION: **AdvancedMaterialsThuAM-R8**

**Marquis International Symposium on
New and Advanced Materials and
Technologies for Energy, Environment
and Sustainable Development**

Thu Oct, 26 2017

Room: **Maria Luisa & Maria Fernanda**

Session Chairs: Mahesh **Kumar**; Anil Shantappa **Malipatil**; Session Monitor: TBA

11:00: [AdvancedMaterialsThuAM01]

**State-of-the-art Bioassays Applications to Monitor Advanced Oxidation Process
Efficiency for Environmental Remediation**

Munawar Iqbal¹ ; ¹Pakistan, Lahore, Pakistan;

Paper Id: 236_

11:30: [AdvancedMaterialsThuAM02] Invited

Energy Efficient Nano-devices for the Better and Sustainable Society

Mahesh Kumar¹ ; ¹Indian Institute of Technology Jodhpur, Jodhpur, India;

Paper Id: 247_

12:00: [AdvancedMaterialsThuAM03] Invited

Study of Effective atomic numbers of Bioactive Glasses for Photon Interaction

Anil Shantappa Malipatil¹ ; S.m Hanagodimath² ; ¹GURU NANAK DEV
ENGINEERING COLLEGE BIDAR KARNATAKA INDIA, gulbarga, India; ²GULBARGA
UNIVERSITY KALABURAGI KARNATAKA, KALABURAGI, India;

Paper Id: 277_

12:30: [AdvancedMaterialsThuAM04]

Some Important Factors in Porphyrin-based Dye-sensitized Solar Cells: An Empirical and Theoretical Study

Nasser Safari¹ ; Pooya Tahay¹ ; Maryam Adineh¹ ; Zahra Parsa¹ ; Ali Alavi¹ ; Eric Wei Guangdiao² ; ¹Shahid Beheshti University, tehran, Iran (Islamic Republic of Iran); ²National Chiao Tung University, Hsinchu, Taiwan ("Chinese Taipei" for IOC);
Paper Id: 295_

13:00 LUNCH

SESSION: **AdvancedMaterialsThuPM-R8**

**Marquis International Symposium on
New and Advanced Materials and
Technologies for Energy, Environment
and Sustainable Development**

Thu Oct, 26 2017

Room: **Maria Luisa & Maria Fernanda**

Session Chairs: Ratnakar **Lanjewar**; Maria A. G. **Soler**; Session Monitor: TBA

14:30: [AdvancedMaterialsThuPM05] Keynote

Layer-by-Layer Assembled Nanocomposite Films for Energy Systems

Maria A. G. Soler¹ ; ¹Universidade de Brasilia, Brasilia, Brazil;

Paper Id: 77_

15:00: [AdvancedMaterialsThuAM06]

Synthesis and characterization of Copper Nanoparticle,Copper-urea formaldehyde and Copper oxide Urea formaldehydenanocomposite and their application for adsorption of heavy metals from waste water

Ratnakar Lanjewar¹ ; ¹Department of Chemistry, Dharampeth M.P.Deo Memorial Science College, Nagpur, Nagpur, India;

Paper Id: 280_

08:15 AM - 10:30 PM **SUMMIT PLENARY**

10:30 AM Break

SESSION: **CompositeThuAM-R9**

5th Intl. Symp. on Composite, Ceramic and Nano Materials Processing, Characterization and Applications

Thu Oct, 26 2017

Room: **Condesa III**

Session Chairs: Martin **Pech-Canul**; Beatriz **Ruiz Camacho**;
Nikolai **Boshkov**; Session Monitor: TBA

11:00: [CompositeThuAM01] Plenary

[Boron-related materials, preparation, structure and application] **An overview of the versatility of silicon nitride as structural, functional and bioceramic material**
Martin Pech Canul¹ ; Milka Del C. Acosta Enriquez² ; Eulices B. Acosta Enriquez³ ; Ena A. Aguilar Reyes⁴ ; Carlos A. Leon Patino⁵ ; Florian Kongoli⁶ ; ¹Cinvestav-Salttillo, Ramos Arizpe, Mexico; ²Universidad de Sonora, Departamento de Investigacion en Fisica, Hermosillo, Mexico; ³Universidad de Sonora, Departamento de Fisica, Hermosillo, Mexico; ⁴Universidad Michoacana de San Nicolas de Hidalgo, Instituto de Investigacion en Metalurgia y Materiales, Morelia, Mexico; ⁵UNIVERSIDAD MICHOACANA, Morelia, Mexico; ⁶Flogen Technologies Inc., Mont-Royal, Canada;
Paper Id: 303_

11:30: [CompositeThuAM02]

Advances in the Field of CERAMIC-MATRIX Composites: A Review
Martin Pech Canul¹ ; Jose C. Flores Garcia¹ ; Socorro Valdez² ; Héctor Hernández García³ ; Maximo Pech Canul⁴ ; Jorge Lopez Cuevas¹ ; Juan Carlos Rendon Angeles⁵ ; ¹Cinvestav-Salttillo, Ramos Arizpe, Mexico; ²Instituto de Ciencias Fisicas-UNAM, Cuernavaca, Mexico; ³COMIMSA, Saltillo, Mexico; ⁴Cinvestav Merida, Merida, Mexico; ⁵Cinvestav Saltillo, Ramos Arizpe, Mexico;
Paper Id: 55_

12:00: [CompositeThuAM03]

TaC-Containing Ti(CN)-WC-Ni/Co Cermets for the Improved Machining Performance
Vikas Verma¹ ; B. V. Manoj Kumar² ; ¹, ROORKEE, India; ²IIT ROORKEE, ROORKEE, India;
Paper Id: 206_

12:30: [CompositeThuAM04]

[Boron-related materials, preparation, structure and application] **Zeolite Coating on Glass Spheres: Effect of Physical and Chemical Modification**
Georgina Garcia¹ ; Adriana Medina Ramirez² ; Beatriz Ruiz Camacho³ ; Cristian Navarro Anaya⁴ ; ¹University of La Cienega, Sahuayo, Mexico; ²Universidad de Guanajuato, Campus Guanajuato, Guanajuato, Mexico; ³Universidad de Guanajuato, Guanajuato, Mexico; ⁴Universidad de La Cienega del Estado de Michoacan de Ocampo, Sahuayo, Mexico;
Paper Id: 201_

13:00 LUNCH

14:30: [CompositeThuPM05]

Combined Computational and Experimental Investigation on the Sm₂O₃-BaO System

Weiping Gong¹ ; ¹Huizhou University, Huizhou, China;

Paper Id: 172__

15:00: [CompositeThuAM06]

Digital image correlation (DIC) technique for fracture toughness calculation of microalloyed steel (38MnVS6).

Akshay Patil¹ ; ¹bharat forge, pune, India;

Paper Id: 328__

15:30: [CompositeThuAM07]

[Boron-related materials, preparation, structure and application] **Enhancement of Surface Potential in Hydrothermally Synthesized Co₃O₄-reduced Graphene Oxide Nanocomposites**

Amodini Mishra¹ ; ¹SCHOOL OF PHYSICAL SCIENCES, New delhi, India;

Paper Id: 266__

16:00: [CompositeThuAM08]

[Boron-related materials, preparation, structure and application] **Enhancement of Surface Potential in Hydrothermally Synthesized Co₃O₄-reduced Graphene Oxide Nanocomposites**

Amodini Mishra¹ ; Tanuja Mohanty¹ ; ¹SCHOOL OF PHYSICAL SCIENCES, New delhi, India;

Paper Id: 268__

Posters

SESSION:MultiscalePoster

4th Intl. symp. on Multiscale Material Mechanics and Multiphysics and Sustainable Applications

Room: Condesa Foyer

Poster Session

22-26 Oct, 2017

[MultiscalePoster1] **Fracture Mechanics Tests with the Use of Miniaturized Test Specimens**

Libor. Kraus ¹ ; Martin. Rund ² ; Jan. Dzugan ³ ; ¹COMTES FHT Inc., Dobrany, Czech Republic; ²COMTES FHT, Dobrany, Czech Republic; ³COMTES FHT, Donrany, Czech Republic;

Paper Id: 117

SESSION:MetalsPoster

3rd Intl. Symp. on Sustainable Metals & Alloys Processing

Room: Condesa Foyer

Poster Session

22-26 Oct, 2017

[MetalsPoster1] **Control of Melting Process Quality Using by Thermal Analysis of Molten Metal in Production of Ductile Iron**

Peter. Futas ¹ ; Alena. Pribulova ² ; Jozef. Petrik ³ ; ¹Tecnical university of Kosice, Kosice, Slovakia (Slovak Republic); ²Technical university in Kosice, Faculty of Metallurgy, Kosice, Slovakia (Slovak Republic); ³Technical university of Kosice, Kosice, Slovakia (Slovak Republic);

Paper Id: 65

[MetalsPoster2] **Analytical Modelling of Surface Temperature in Cylindrical Grinding**

Azhar. Thanedar ¹ ; ¹Bharat Forge Ltd., Pune, India;

Paper Id: 344

SESSION:AluminumPoster

2nd Intl. Symp. on Sustainable Aluminum Extraction and Processing

Room: Condesa Foyer

Poster Session

22-26 Oct, 2017

[AluminumPoster1] **Geotechnical Characterization and Evaluation of the Behavior of a Filtered Residue from the Production of Alumina (red mud) stored as densified landfill.**

Manoela. Neves ¹ ; ¹PONTIFICIA UNIVERSIDADE CATOLICA DO RIO DE JANEIRO, RIO DE JANEIRO, Brazil;

Paper Id: 167

SESSION: MiningPoster

4th Intl. Symp. on Sustainable Mining Operations

Room: Condesa Foyer

Poster Session

22-26 Oct, 2017

[MiningPoster1] **Analysis and Sensitivity Evaluation of the Safety Factor in the Change of the Values of Certain Geo-Mechanical Parameters**

Idaver. Huseini¹; ¹Usht, Tetovo, Macedonia (Former Yugoslav Republic of Macedonia);
Paper Id: 60

[MiningPoster2] **The Micon Hybrid II, 50-psi, Mine Ventilation Seal with Access Door**

Stephen. Sawyer¹; George. Watson²; David. Hussey²; ¹Sawyer Engineering, McMurray, United States; ²Micon, Inc., Glassport, United States;
Paper Id: 125

[MiningPoster3] **The MICON, Hybrid II, 50-psi, Mine Ventilation Seal with Access Door**

George. Watson¹; Stephen. Sawyer²; David. Hussey¹; ¹Micon, Inc., Glassport, United States; ²MICON, Glassport, United States;
Paper Id: 279

SESSION: MineralPoster

Lotter International Symposium on Sustainable Mineral Processing

Room: Condesa Foyer

Poster Session

22-26 Oct, 2017

[MineralPoster1] **Combined Microflotation as a Powerful Technology of Fine Ferrous Ore Beneficiation**

Niclolaj. Rulyov¹; ¹Institute of Biocolloid Chemistry, Ukrainian National Academy of Sciences, Kyiv, Ukraine, Kyiv, Ukraine;
Paper Id: 88

[MineralPoster2] **Development of Heap Leaching Technology for Oxide Copper Ores in Kazakhstan**

Anna. Reznichenko¹; Larissa. Kushakova¹; ¹VNIItsvetmet, Ust-Kamenogorsk, Kazakhstan;
Paper Id: 128

[MineralPoster3] **Desulfurization**

Hassan. Rezvanipour¹; ¹, Kerman, Iran (Islamic Republic of Iran);
Paper Id: 131

[MineralPoster4] Modeling of Filtration Process of Concentrates of Inorganic Compounds with the Formation of Compressible Sediments

Mirsalim. Asadov ¹ ; Tamila. Qurbanzade ² ; ¹Institute of Catalysis and Inorganic Chemistry, Azerbaijan National Academy of Sciences, Baku, Azerbaijan; ²Institute of Catalysis and Inorganic Chemistry, Azerbaijan National Academy of Sciences, Baku, Azerbaijan;

Paper Id: 132

[MineralPoster5] Analysis of the Sensitivity of the Geo-Mechanical Stability of Slopes of the Surface Coal Mines Oslomej within the Tpp "Oslomej" of the Main Influential Factors

Idaver. Huseini ¹ ; ¹Usht, Tetovo, Macedonia (Former Yugoslav Republic of Macedonia);

Paper Id: 141

[MineralPoster6] Actual Status and Processing Prospects Technogenic Coal Deposits

Yuliy. Rubinstein ¹ ; ¹Solid Fuel Preparation Institute, Lubertsy, Russian Federation;

Paper Id: 161

[MineralPoster7] Industrial Impact Development for OptimOre, a Collaborative EU Project on Sustainable Supply of Raw Materials (Tungsten and Tantalum)

Yousef. Ghorbani ¹ ; ¹Camborne School of Mines - University of Exeter, Exeter, Great Britain;

Paper Id: 179

[MineralPoster8] Making Sense of Mineral-based Characterization Technologies: Old and New Perspectives for Sustainable Mineral Processing

Alan. Butcher ¹ ; ¹Geological Survey of Finland, Helsinki, Finland;

Paper Id: 183

SESSION:AdvancedMaterialsPoster

Marquis International Symposium on New and Advanced Materials and Technologies for Energy, Environment and Sustainable Development

Room: Condesa Foyer

Poster Session

22-26 Oct, 2017

[AdvancedMaterialsPoster1] Next Generation Organic Blend Semiconductors for Transistor and Flexible Microelectronic Applications

Thomas. Anthopoulos ¹ ; ¹King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia (Kingdom of Saudi Arabia);

Paper Id: 89

[AdvancedMaterialsPoster2] **A Two-Stage Fluidized Bed Hydrogen Reduction Process for the Production of High-Purity Ni Particles**

Young Ok. Park ¹ ; Jae-rang. Lee ¹ ; Naim. Hasolli ¹ ; Seong-min. Jeon ¹ ; Kang-san. Lee ¹ ; Kwang-deuk. Kim ¹ ; ¹Korea Institute of Energy Research, Deajeon, Korea (Republic of [South] Korea);

Paper Id: 113

[AdvancedMaterialsPoster3] **On the Mechanical Behavior of CGO-LSCF Coral Type Composite Coatings for Solid Oxide Fuel Cells**

Amelia. Almeida ¹ ; Jaroslaw. Sar ² ; Elisabeth. Djurado ³ ; Rudy. Ghisleny ⁴ ; ¹Instituto Superior Tecnico, Lisboa, Portugal; ²Instituto Superior Tecnico (Universidade de Lisboa) and Grenoble INP (LEPMI), Lisboa, Portugal; ³Grenoble INP - LEPMI, St. Martin d'Heres, France; ⁴EMPA-Swiss Federal Laboratories for Materials Testing and Research, Thun, Switzerland (Confederation of Helvetia);

Paper Id: 140

[AdvancedMaterialsPoster4] **Semiconducting Polymers and Hybrids for OPVs and PLEDs: Scalability and Optoelectronic Properties Modulation**

Joannis. Kallitsis ¹ ; ¹University of Patras & FORTH/ICE-HT, Rio, Greece;

Paper Id: 146

[AdvancedMaterialsPoster5] **The Commercial Application of Nanogold Catalysts**

Caixia. Qi ¹ ; ¹, Yantai, China;

Paper Id: 218

[AdvancedMaterialsPoster6] **Fabrication of Low-cost Spargers and Bubble Column Characterization for Aqueous and Non-aqueous Solutions**

Behnam. Mostajeran Goortani ¹ ; Elham. Khoshandam ² ; ¹University of Isfahan, Isfahan, Iran (Islamic Republic of Iran); ²MASTER STUDENT, Isfahan, Iran (Islamic Republic of Iran);

Paper Id: 237

[AdvancedMaterialsPoster7] **Magnesium (Mn3O4) Nanoparticles–Chitosan Nanocomposite Based Urea Biosensor**

Akbar. Ali ¹ ; ¹Pakistan Institute of Nuclear Science and Technology, Nilore, Pakistan;

Paper Id: 249

[AdvancedMaterialsPoster8] **On The Prediction of Mechanical Properties of Carbon Nanotube Reinforced Polymer**

Roham. Rafiee ¹ ; ¹University of Tehran, Tehran, Iran (Islamic Republic of Iran);

Paper Id: 253

[AdvancedMaterialsPoster9] **Applied R&D in The Field of Glass-Fiber Reinforced Thermosetting-Resin Pipes**

Roham. Rafiee ¹ ; ¹University of Tehran, Tehran, Iran (Islamic Republic of Iran);

Paper Id: 254

[AdvancedMaterialsPoster10] **Improving sustainability of adipic acid production**
Luísa. Martins ¹ ; ¹University of Lisbon, Lisboa, Portugal;
Paper Id: 267

[AdvancedMaterialsPoster11] **A Theoretical Study of Copper Sulfide Nanoalloy Clusters: Density Functional Approach**
Tanmoy. Chakraborty ¹ ; ¹Manipal University Jaipur, Jaipur, India;
Paper Id: 290

[AdvancedMaterialsPoster12] **Competitive Crystallization and Complex Phases in Amorphous Aluminum-rare-earth Alloys**
Ralph. Napolitano ¹ ; Matthew. Kramer ² ; Lin. Zhou ² ; ¹Materials Science and Engineering, Iowa State University, Ames, United States; ²Ames Laboratory, Ames, United States;
Paper Id: 308

[AdvancedMaterialsPoster13] **Metal Clusters on Semiconductor Surfaces for Catalysis Applications**
Gunther. Andersson ¹ ; ¹Flinders University, Adelaide, Australia;
Paper Id: 311

[AdvancedMaterialsPoster14] **Synthesis and Multi-scale Characterization of Bio-Adhesives from Bio-mass**
Ellie Fini¹ ; Mahour Parast² ; ¹North Carolina A&T State University, Greensboro, United States; ²North Carolina A&T State University, Greensboro, United States;
Paper Id: 251_

SESSION:RecyclingPoster

**5th Intl. Symp. on Sustainable
Materials Recycling Processes and Products**

Room: Condesa Foyer

Poster Session

22-26 Oct, 2017

[RecyclingPoster1] **Diffusion Behavior of Rare Earth Elements Contained in Permanent Magnet with Molten Bismuth by Pyrometallurgical Process**
Sunwoo. Nam ¹ ; Sardar Farhat. Abbas ¹ ; Young-soo. Kim ¹ ; Dae-kyeom. Kim ¹ ; Do Hyang. Kim ² ; Taek-soo. Kim ¹ ; ¹KITECH, Incheon, Korea (Republic of [South] Korea); ²Yonsei University,, Seoul, Korea (Republic of [South] Korea);
Paper Id: 62

[RecyclingPoster2] **Complex Treatment of Wastes from Castings Production**
Alena. Pribulova ¹ ; Peter. Futas ² ; Jozef. Petrik ³ ; Marianna. Bartosova ⁴ ; ¹Technical university in Kosice, Faculty of Metallurgy, Kosice, Slovakia (Slovak Republic); ²Technical university of Kosice, Kosice, Slovakia (Slovak Republic); ³Technical university of Kosice, Kosice, Slovakia (Slovak Republic); ⁴Technical university in Kosice, Faculty of metallurgy, Kosice, Slovakia (Slovak Republic);

[RecyclingPoster3] Value Addition of LD Slag at Tata Steel by Effective Utilization of Non-metallic Fines for Possible Industrial Applications

Shrenivas. Ashrit ¹ ; Ravikrishna. Chatti ¹ ; Supriya. Sarkar ¹ ; Venugopal. Rayasam ² ; Udayabhenu. Gopalakrishnan Nair ² ; ¹Tata Steel Limited, Jamshedpur, Jamshedpur, India; ²INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES), DHANBAD, Dhanbad, India;

Paper Id: 226

SESSION:EnvironmentalPoster	6th Intl. Symp. on Environmental, Health, Policy, Legal, Management and Social Issues Related to Metals, Materials and Mineral Processing
Poster Session	Room: Condesa Foyer 22-26 Oct, 2017

[EnvironmentalPoster1] Profitable Texnology for Processing of Gold-Containing Copper-Zink Ore

Tsisana. Gagnidze ¹ ; Rusudan. Chagelishvili ¹ ; ¹Ivane Javakhishvili Tbilisi State University, Rafael Agladze Institute of Inorganic Chemistry and Electrochemistry, Tbilisi, Georgia;

Paper Id: 87

[EnvironmentalPoster2] Profitable Technology for Processing of Gold-Containing Copper-Zink Ore

Tsisana. Gagnidze ¹ ; Rusudan. Chagelishvili ¹ ; ¹Ivane Javakhishvili Tbilisi State University, Rafael Agladze Institute of Inorganic Chemistry and Electrochemistry, Tbilisi, Georgia;

Paper Id: 116

[EnvironmentalPoster3] Profitable Technology for Processing of Gold-Containing Copper-Zink Ore

Tsisana. Gagnidze ¹ ; Rusudan. Chagelishvili ¹ ; Zhiul. Keadze ¹ ; ¹Ivane Javakhishvili Tbilisi State University, Rafael Agladze Institute of Inorganic Chemistry and Electrochemistry, Tbilisi, Georgia;

Paper Id: 156

SESSION:RarePoster	4th Intl. Symp. on Rare Earth and Platinum Group Metals: Managing and Processing
	Room: Condesa Foyer
Poster Session	22-26 Oct, 2017

[RarePoster1] Selective Recovery of Rare earth elements from NdFeB powders by using caustic digestion and oxidation roasting

Ho-sung. Yoon ¹ ; Chul Joo. Kim ² ; Kyeong Woo. Chung ³ ; ¹Korea Institute of Geoscience and Mineral Resources, Daejeon, Korea (Republic of [South] Korea); ²KOREA INSTITUTE OF GEOSCIENCE AND MINERAL RESOURCES (KIGAM), Daejeon, Korea (Republic of [South] Korea); ³Korea Institute of Geoscience and Mineral resources, Daejeon, Korea (Republic of [South] Korea);
Paper Id: 50

[RarePoster2] Recovery of Rare Earth Elements in Sulfuric Acid Leaching Solution from Waste Permanent Magnet Scrap

Chul Joo. Kim ¹ ; Ho-sung. Yoon ² ; Kyeong Woo. Chung ³ ; ¹KOREA INSTITUTE OF GEOSCIENCE AND MINERAL RESOURCES (KIGAM), Daejeon, Korea (Republic of [South] Korea); ²Korea Institute of Geoscience and Mineral Resources, Daejeon, Korea (Republic of [South] Korea); ³Korea Institute of Geoscience and Mineral resources, Daejeon, Korea (Republic of [South] Korea);
Paper Id: 51

[RarePoster3] Recovery of Rare Earths Elements from Neodymium Magnets using Solvent Extraction: the Effect of Diluents

Marino. Gergoric ¹ ; Teodora. Retegan ² ; ¹Chalmers University of Technology, Gothenubrg, Sweden; ²Chalmers University of Technology, Gothenburg, Sweden;
Paper Id: 72

SESSION:MoltenPoster	Gaune-Escard International Symposium on Sustainable Molten Salt and Ionic Liquid Processing
	Room: Condesa Foyer
Poster Session	22-26 Oct, 2017

[MoltenPoster1] Electrodeposition of Molybdenum Carbide onto the Surfaces of Disperse Dielectric and Semiconductor Materials

Viktor. Malyshev ¹ ; Dmytro. Shakhnin ² ; Angelina. Gab ¹ ; Alla. Suschenko ¹ ; Marcelle. Gaune Escard ³ ; ¹University "Ukraine", Kyiv, Ukraine; ²V.I. Vernadsky Institute of General and Inorganic Chemistry of the National Academy of Sciences of Ukraine, Kyiv, Ukraine; ³AIX-MARSEILLE UNIVERSITE/POLYTECH, CNRS/IUSTI UMR7343, Marseille, France;

[MoltenPoster2] **Conductivity Evaluation of (LiCl-KCl)eut. Based Molten Mixtures Containing Rare Earth and Uranium Chlorides**

Alexei. Potapov ¹; Alexander. Salyulev ¹; ¹Institute of High Temperature Electrochemistry, Ekaterinburg, Russian Federation;
Paper Id: 43

[MoltenPoster3] **Maximum on Molten TeCl₄ Electrical Conductivity Polytherm**

Alexander. Salyulev ¹; Alexei. Potapov ¹; ¹Institute of High Temperature Electrochemistry, Ekaterinburg, Russian Federation;
Paper Id: 44

[MoltenPoster4] **Electrical Conductivity and Raman Spectra of Molten GaCl₃ – PCI₅ Mixtures**

Alexander. Salyulev ¹; Alexei. Potapov ¹; Emma. Vovkotrub ¹; ¹Institute of High Temperature Electrochemistry, Ekaterinburg, Russian Federation;
Paper Id: 45

[MoltenPoster5] **Synthesis of Mesoporous Materials in Molten Electrolyte**

Evgeniya. Nikitina ¹; Nikolay. Tkachev ¹; Natalja. Kazakovtseva ¹; Eduard. Karfidov ¹; Mikhail. Maikov ¹; ¹Institute of High Temperature Electrochemistry, Ekaterinburg, Russian Federation;
Paper Id: 54

[MoltenPoster6] **Study of the Influence Alkaline Earth Metal Cations on the Electrochemical Behavior of the Redox Couple Nb(V)/Nb(IV) in Alkali Halide Melt**

Sergey. Kuznetsov ¹; Darja. Vetrova ¹; ¹Institute of Chemistry, Kola Science Centre RAS, Apatity, Russian Federation;
Paper Id: 84

[MoltenPoster7] **Electrochemical Utilization of Carbon Dioxide in Molten Salts**

Sergei. Kuleshov ¹; Inessa. Novoselova ¹; ¹Institute of General and Inorganic Chemistry, Kiev, Ukraine;
Paper Id: 101

[MoltenPoster8] **Physicochemical and Electrochemical Properties of Dicyanamide Based Ionic Liquids with γ Butyrolactone as Electrolyte for Lithium Ion Batteries**

Slobodan. Gadzuric ¹; Nebojsa. Zec ²; Milan. Vraneš ¹; Marija. Bester Rogac ³; Nikola. Cvjetanin ⁴; ¹Faculty of Sciences, University of Novi Sad, Novi Sad, Serbia and Montenegro (formerly Yugoslavia); ²Faculty of Sciences, Novi Sad, Serbia and Montenegro (formerly Yugoslavia); ³Faculty of Chemistry and Chemical Technology, Ljubljana, Slovenia; ⁴Faculty of Physical Chemistry, University of Belgrade, Belgrade, Serbia and Montenegro (formerly Yugoslavia);

[MoltenPoster9] Inhibition Properties of Imidazolium Based Ionic Liquids for Copper Corrosion Protection

Gyongyi. Vastag ¹ ; Slobodan. Gadzuric ¹ ; Milan. Vraneš ¹ ; Aleksandar. Tot ¹ ; Nebojsa. Zec ² ; Abdul. Shaban ³ ; ¹Faculty of Sciences, University of Novi Sad, Novi Sad, Serbia and Montenegro (formerly Yugoslavia); ²Faculty of Sciences, Novi Sad, Serbia and Montenegro (formerly Yugoslavia); ³Research Centre for Natural Sciences, Hungarian Academy of Sciences, Budapest, Hungary;

Paper Id: 119

[MoltenPoster10] Aggregation Behavior of New Thiazolium-Based Surface-Active Ionic Liquids and Salts - Experimental and DFT Study

Milan. Vraneš ¹ ; Slobodan. Gadzuric ¹ ; Snezana. Papovic ¹ ; Aleksandar. Tot ¹ ; Marija. Bester Rogac ² ; Jovana. Panic ¹ ; ¹Faculty of Sciences, University of Novi Sad, Novi Sad, Serbia and Montenegro (formerly Yugoslavia); ²Faculty of Chemistry and Chemical Technology, Ljubljana, Slovenia;

Paper Id: 135

[MoltenPoster11] Relation of Thermodynamic Data with Periodic Law

Valery. Vassiliev ¹ ; Valery. Lysenko ² ; Marcelle. Gaune Escard ³ ; ¹Lomonosov Moscow State University, Moscow, Russian Federation; ²Lomonosov Moscow State University, Moscow, Russian Federation; ³Polytech, Marseille, France;

Paper Id: 157

[MoltenPoster12] Specific Electrical Conductivity in Solid and Molten CsH₂PO₄ and Cs₂H₂P₂O₇ – A Potentially New Electrolyte for Water Electrolysis at ~225-400 °C

Aleksey. Nikiforov ¹ ; Rolf. Berg ² ; Niels. Bjerrum ³ ; ¹Technical University of Denmark, Kongens Lyngby, Denmark; ²Technical University of Denmark, Department of Chemistry, Lyngby, Denmark; ³Technical University of Denmark, Department of Energy Conversion and Storage, Lyngby, Denmark;

Paper Id: 197

SESSION:BatteryPoster

4th Intl. Symp. on Sustainable

Secondary Battery Manufacturing and Recycling

Room: Condesa Foyer

Poster Session

22-26 Oct, 2017

[BatteryPoster1] On the use of GMLS to generate a meshless discretization tool for battery failure

Nathaniel. Trask ¹ ; ¹Sandia National Laboratories, Albuquerque, United States;

Paper Id: 299

SESSION:NanomaterialsPoster

**4th Intl. Symp. on Synthesis and Properties
of Nanomaterials for Future Energy Demands**

Room: Condesa Foyer

Poster Session

22-26 Oct, 2017

**[NanomaterialsPoster1] Platinum Nanoparticles Supported on Different Substrates
as Electrocatalysts for Oxygen Reduction Reaction**

Beatriz. Ruiz Camacho ¹; Adriana. Medina Ramirez ²; Claudia.

Martinez ¹; ¹Universidad de Guanajuato, Guanajuato, Mexico; ²Universidad de
Guanajuato, Campus Guanajuato, Guanajuato, Mexico;

Paper Id: 73

SESSION:EnergyPoster

**Dodds International Symposium on Sustainable
Energy Production**

Room: Condesa Foyer

Poster Session

22-26 Oct, 2017

**[EnergyPoster1] Experimental Assessment of a Lysine Derivative Surfactant for
Enhanced Oil Recovery in Carbonate Rocks: Mechanistic and Core Displacement
Analysis**

Alireza. Rostami ¹; Abdolnabi. Hashemi ²; Mohammad Ali. Takassi ³; Amin.

Zadehnazari ³; ¹, Ahwaz, Iran (Islamic Republic of Iran); ²Department of Petroleum
Engineering, Petroleum Uof Technology, Ahwaz, Iran, Ahwaz, Iran (Islamic Republic of
Iran); ³Department of Science, Petroleum University of Technology (PUT), Ahwaz, Iran,
Ahwaz, Iran (Islamic Republic of Iran);

Paper Id: 97

[EnergyPoster2] Oil Production and Environmental Damage

Fatemeh. Dehghani ¹; ¹Jahad Daneshghahi University, Omidieh, Iran (Islamic
Republic of Iran);

Paper Id: 24

[EnergyPoster3] Applications of Catalysts in Oil and Gas Industry

Fatemeh. Dehghani ¹; ¹Jahad Daneshghahi University, Omidieh, Iran (Islamic
Republic of Iran);

Paper Id: 25

**[EnergyPoster4] Cathodic Protection and Anti-Corrosion Treatments of Galvanic
and High Temperature Corrosion**

Fatemeh. Dehghani ¹; ¹Jahad Daneshghahi University, Omidieh, Iran (Islamic
Republic of Iran);

Paper Id: 26

[EnergyPoster5] **Sand Production Mechanisms in an Oil Reservoir**

Maryam. Dehghani ¹ ; ¹National Iranian South Oil Company (NISOC) - National Iranian Oil Company (NIOC), Omidieh, Iran (Islamic Republic of Iran);
Paper Id: 27

[EnergyPoster6] **Effect of Gas Injection on Reservoir Fluid Properties of a Fractured Oil Reservoir**

Maryam. Dehghani ¹ ; ¹National Iranian South Oil Company (NISOC) - National Iranian Oil Company (NIOC), Omidieh, Iran (Islamic Republic of Iran);
Paper Id: 28

[EnergyPoster7] **Low Cost Printed Sensors for the Energy Industry Sustainability**

Marissa. Morales Rodriguez ¹ ; ¹Oak Ridge National Laboratory, Oak Ridge, United States;
Paper Id: 76

[EnergyPoster8] **Management and Saving of the Electricity in Household in Kosovo - A Case Study**

Mehmet. Qelaj ¹ ; Justina. Shiroka Pula ² ; Violeta. Nushi ³ ; Musa. Rizaj ⁴ ; ¹Ministry of Economic Development, Prishtina, Kosovo; ²University of Prishtina "Hasan Prishtina", Prishtina, Kosovo; ³University of Prishtina "Hasan Prishtina", Prishtina, Kosovo; ⁴University of Prishtina, Prishtina, Kosovo;
Paper Id: 130

[EnergyPoster9] **Cybersecurity Implications for Sustainable Energy Production**

Peter. Fuhr ¹ ; ¹Oak Ridge National Laboratory, Oak Ridge, United States;
Paper Id: 332

5th Intl. Symp. on Composite, Ceramic and Nano Materials Processing, Characterization and Applications	
SESSION:CompositePoster	
Room: Condesa Foyer	
Poster Session	22-26 Oct, 2017

[CompositePoster1] **Modification of Pattern Visibility in MTO/Ag/ MTO/ SiO₂ / TiO₂ Multilayer Film Deposited on PET Film**

Guneik. Jang ¹ ; Sangmoo. Yoon ¹ ; ¹Chungbuk National University, Cheongju, Korea (Republic of [South] Korea);
Paper Id: 307

[CompositePoster2] **Synthesis and Structural Characterization of Silver Nanoparticles (Ag NPs) for Joint Pain Formulation Application**

Akbar. Ali ¹ ; Umer. Balil ² ; Nasir. Mehboob ² ; Mukhtar. Ahmad ¹ ; Ghazanfar. Abbas ¹ ; Hammad. Aziz ³ ; Muhammad Junaid. Amjad ⁴ ; ¹comsats lahore, lahroe, Pakistan; ²Riphah university Islamabad, Islamabad, Pakistan; ³Comsats lahore., Lahore, Pakistan; ⁴comsats lahore, Lahore, Pakistan;
Paper Id: 333

Technical Program Authors Index

A

[Abashidze,](#)

[Guram.,](#) AdvancedMaterialsMonAM06

[Abbas, Sardar](#)

[Farhat.,](#) RecyclingSession(poster)

[Abbas,](#)

[Ghazanfar.,](#) CompositeSession(poster)

[Abbas Shah,](#)

[Nazar.,](#) AdvancedMaterialsThuAM04

[Abdalla Ayoub,](#)

[Mohammad.,](#) EnergyWedAM06

[Abo Atia,](#)

[Thomas.,](#) RecyclingWedAM07, RecyclingThuAM01

[Acar, Emre.,](#) IronMonPM05

[Acosta-enriquez, Milka Del](#)

[C.,](#) CompositeThuAM01

[Acosta-enriquez, Eulices](#)

[B.,](#) CompositeThuAM01

[Adineh,](#)

[Maryam.,](#) AdvancedMaterialsThuAM04

[Aguilar-reyes, Ena](#)

[A.,](#) CompositeThuAM01

[Ahmad,](#)

[Mukhtar.,](#) CompositeSession(poster)

[Aifantis,](#)

[Katerina.,](#) SummitPlenaryThuAM02, BatteryMonAM04, BatteryTueAM04

[Aigbavboa,](#)

[Clinton.,](#) EnvironmentalWedAM01

[Akhmadullin, Ildar.,](#) EnergyTueAM08

[Akhtar,](#)

[Nasrin.,](#) AdvancedMaterialsTueAM06

[Akhtar,](#)

[Kalsoom.,](#) AdvancedMaterialsTueAM06

[Akhtar,](#)

[Farid.,](#) AdvancedMaterialsMonPM05

[Akurati,](#)

[Sashanka.,](#) AdvancedMaterialsWedAM03

[Al-juboori, Ossama.,](#) MoltenTueAM03

[Al-shroofy, Mohanad.,](#) BatteryMonAM07

[Alam,](#)

[Parvez.,](#) AdvancedMaterialsMonAM01

[Alam,](#)

[Lilja.,](#) AdvancedMaterialsMonAM01

[Alavi, Ali.,](#) AdvancedMaterialsThuAM04

[Albertini, David.,](#) SISAMTueAM01

[Ali,](#)

[Akbar.,](#) AdvancedMaterialsSession(poster)

[Ali, Akbar.,](#) CompositeSession(poster)

[Almaquer-flores,](#)

[Argelia.,](#) AdvancedMaterialsTueAM02

[Almeida,](#)

[Amelia.,](#) AdvancedMaterialsSession(poster)

[Altimari,](#)

[Pietro.,](#) RecyclingWedAM07, RecyclingThuAM01

[Alvarez, Margarita.,](#) Non-ferrousTueAM03

[Amatore,Christian.,](#) SummitPlenaryTueAM04

[Amjad, Muhammad](#)

[Junaid.,](#) CompositeSession(poster)

[Andersson,](#)

[Gunther.,](#) AdvancedMaterialsSession(poster)

[Andrei, Petru.,](#) BatteryTueAM02

[Andresen, Bjarne.,](#) EnergyMonAM08

[Anthopoulos,](#)

[Thomas.,](#) AdvancedMaterialsSession(poster)

[Antrekowitsch, Juergen.,](#) Non-ferrousTueAM07, RecyclingWedPM05

[Araujo, Mireyll.,](#) MineralTueAM03

[Araujo, Fernando Gabriel](#)

[Silva.,](#) IronTueAM03

[Aristone,](#)

[Flavio.,](#) EnvironmentalWedAM06

[Arzel, Ludovic.,](#) SISAMMonAM06

[Asadov,](#)

[Mirsalim.,](#) MineralSession(poster)

[Ashrit,](#)

[Shrenivas.,](#) RecyclingSession(poster)

[Assis, Paulo.,](#) IronMonAM01

[Aziz,](#)

[Hammad.,](#) CompositeSession(poster)

B

[Baj, Elzbieta.](#), CoatingsTueAM06
[Baboux, Nicolas.](#), SISAMTueAM01
[Baczek, Elzbieta.](#), CompositeWedAM02
[Badenhorst, Jacoba.](#), EnergyTueAM07
[Bae, Sang-eun.](#), MoltenMonPM05, MoltenMonAM06
[Bairaktari, Bekim.](#), MineralTueAM02
[Balil, Umer.](#), CompositeSession(poster)
[Banda, Mahesh.](#), AdvancedMaterialsWedAM03
[Barbakadze, Karlo.](#), AdvancedMaterialsWedPM05
[Barreau, Nicolas.](#), SISAMMonAM06, SISAMMonAM08
[Barrios,Patricio.](#), SummitPlenaryMonAM03, Non-ferrousMonAM01
[Bartosova, Marianna.](#), RecyclingSession(poster)
[Barvitskiy, Pavlo.](#), AdvancedMaterialsThuAM02
[Bauer, Ernst.](#), Session(poster)
[Bello, Hakeem.](#), AdvancedMaterialsTueAM08
[Berg, Rolf.](#), MoltenSession(poster)
[Bester Rogac, Marija.](#), MoltenSession(poster)
[Bhalekar, Anil A.](#), EnergyMonAM08, EnergyTueAM03, EnergyTuePM05
[Bhosale, Vikas K.](#), AdvancedMaterialsThuAM04
[Bibilashvili, Amiran.](#), AdvancedMaterialsWedAM07
[Bittencourt Marques, Mauricio.](#), Non-ferrousMonAM04
[Bjerrum, Niels.](#), MoltenSession(poster)
[Blackmore, Adam.](#), Non-ferrousMonAM07
[Bokuchava, Guram.](#), AdvancedMaterialsWedPM05
[Boshkov, Nikolai.](#), CompositeWedPM05
[Boshkova, Neli.](#), CompositeWedPM05
[Braems, Isabelle.](#), SISAMMonAM08
[Bryant, John.](#), Non-ferrousMonAM03
[Burada, Marian.](#), MoltenMonAM04
[Butcher, Alan.](#), MineralSession(poster)

C

[Cabioc'h, Thierry.](#), AdvancedMaterialsWedAM06
[Candy, Ian.](#), Non-ferrousMonAM03
[Carter, Rachel.](#), BatteryMonAM06
[Castro, Fernando.](#), AdvancedMaterialsThuAM01
[Cathelineau, G.](#), AdvancedMaterialsWedPM05
[Cengeri, Peter.](#), SISAMMonAM04
[Chagelishvili, Rusudan.](#), EnvironmentalSession(poster)
[Chagelishvili, Elquja.](#), AdvancedMaterialsWedAM04
[Chakraborty, Tanmoy.](#), AdvancedMaterialsSession(poster)
[Chartier, Patrick.](#), AdvancedMaterialsWedAM06
[Chatain, Dominique.](#), SummitPlenaryWedAM04
[Chatti, Ravikrishna.](#), RecyclingSession(poster)
[Chavez-urbola, Iker Rodrigo.](#), AdvancedMaterialsMonAM03
[Chekiri, Rafik.](#), Non-ferrousMonAM07
[Chen, George.](#), MoltenTueAM03
[Chen, Pengwan.](#), AdvancedMaterialsWedAM02
[Cheng, Yang-tse.](#), BatteryMonAM07
[Chia, Chin Hua.](#), AdvancedMaterialsWedAM04
[Chikada, Takumi.](#), AdvancedMaterialsTueAM06
[Chikhhradze, Mikheil.](#), AdvancedMaterialsTueAM01
[Chikhhradze, Nikoloz.](#), AdvancedMaterialsThuAM02, AdvancedMaterialsWedAM02, AdvancedMaterialsMonAM06, AdvancedMaterialsTueAM01
[Chirambatte Peter, Sebastian.](#), AdvancedMaterialsThuAM03
[Cho, Young Hwan.](#), MoltenMonAM06
[Choi, Suhee.](#), MoltenMonAM06
[Choi, Suhee.](#), MoltenMonPM05
[Chojnacka, Ida.](#), MoltenMonAM08
[Chun, Jinyoung.](#), BatteryMonAM03
[Chung, Kyeong Woo.](#), Non-ferrousWedAM03

[Clausner, Andre.](#), CoatingsTueAM06
[Coelho,](#)
[Higor.](#), AdvancedMaterialsTueAM08
[Constantin, Virgil.](#), MoltenMonAM04
[Constantin, Ionut.](#), MoltenMonAM04
[Cvjeticanin,](#)
[Nikola.](#), MoltenSession(poster)
[Cyboron.](#)
[Jolanta.](#), AdvancedMaterialsWedAM06

D

[D Abreu, Jose](#)
[Carlos.](#), IronMonAM02, IronTueAM01
[Dalwatkar, Ranjit.](#), MetalsWedAM02
[Danczak, Anna.](#), MoltenMonAM08
[Darsavelidze,](#)
[Giorgi.](#), AdvancedMaterialsWedPM05
[Dawari, Ashish.](#), MetalsTuePM05
[De Souza, Marcos Henrique](#)
[Carlos.](#), Non-ferrousMonAM04
[Dehqhani,](#)
[Fatemeh.](#), EnergySession(poster)
[Delgado, Enrique.](#), Non-ferrousMonAM06
[Derkachova,](#)
[Anastasiya.](#), CoatingsTueAM07
[Deva, Nurten.](#), RecyclingWedAM08
[Dimitrijevic,](#)
[Aleksandra.](#), MoltenTueAM02
[Ding,](#)
[Yang.](#), AdvancedMaterialsWedPM05
[Djordjevic, Jelena.](#), MoltenTueAM02
[Djurado,](#)
[Elisabeth.](#), AdvancedMaterialsSession(poster)
[Dodds, Harold.](#), SummitPlenaryMonPM05, EnergyMonAM01
[Domanov,](#)
[Vladimir.](#), AdvancedMaterialsMonAM04
[Dominguez, Jose Maria.](#), Non-ferrousTueAM03
[Domnich,](#)
[Vladislav.](#), AdvancedMaterialsThuAM02
[Donath, Cristina.](#), MoltenMonAM04
[Dorofeev, Genrikh.](#), IronMonAM04
[Duarte,](#)
[Leandro.](#), AdvancedMaterialsTueAM08
[Dub,](#)
[Sergey.](#), AdvancedMaterialsThuAM02
[Dubiel,](#)

[Aleksandra.](#), CompositeWedAM02
[Dubois, Jean-marie.](#), SISAMTueAM08
[Duchamp, Martial.](#), SISAMTueAM06
[Dunin-borkowski,](#)
[Rafal.](#), SISAMTueAM06
[Dutta Majumdar,](#)
[Jyotsna.](#), AdvancedMaterialsWedAM08
[Dvoeglazov,](#)
[Valeriy.](#), MathematicsWedPM05, MathematicsWedAM06
[Dzugan, Jan.](#), MultiscaleSession(poster)

E

[Ebin,](#)
[Burcak.](#), AdvancedMaterialsWedAM06
[Ekberg,](#)
[Christian.](#), AdvancedMaterialsWedAM06
[Elfeki,](#)
[H.](#), AdvancedMaterialsWedPM05, AdvancedMaterialsWedAM07
[Elfeki,](#)
[A.](#), AdvancedMaterialsWedPM05, AdvancedMaterialsWedAM07
[Eliav,](#)
[Ephraim.](#), AdvancedMaterialsTuePM05
[Elsayed-ali,](#)
[Hani.](#), AdvancedMaterialsThuAM06
[Esmaeili,](#)
[Abdollah.](#), EnergyWedAM04, EnergyWedPM05, EnergyWedAM06, EnergyWedAM07, EnergyWedAM08, EnergyThuAM01

F

[F. J. Willars-rodriguez, Francisco](#)
[Javier.](#), AdvancedMaterialsMonAM03
[Fehrmann, Rasmus.](#), MoltenTueAM01
[Felipe, Elaine.](#), Non-ferrousWedAM01
[Figiel,](#)
[Pawel.](#), AdvancedMaterialsWedAM06
[Fini, Ellie.](#), AdvancedMaterialsPoster14
[Flores-garcia, Jose](#)
[C.](#), CompositeThuAM02
[Forslund, Ola](#)
[Kenji.](#), EnergyMonAM03, SISAMMonAM03
[Fuhr, Peter.](#), EnergySession(poster)
[Fujii, Hidetoshi.](#), CompositeWedAM06
[Furtun, Fikret.](#), IronMonPM05

[Futas, Peter.](#), MetalsSession(poster)

G

[Gab, Angelina.](#), MoltenSession(poster)

[Gadzuric, Slobodan.](#), MoltenTueAM02

[Gagnidze.](#)

[Tsisana.](#), EnvironmentalSession(poster)

[Galiazzi, Cristiane.](#), IronMonAM07

[Gangl, Stephanie.](#), Non-ferrousMonAM07

[Gao, Xueping.](#), BatteryMonAM08

[Garcia.](#)

[Georgina.](#), CompositeWedAM07, CompositeThuAM04

[Garcia, Pablo Daniel.](#), Non-ferrousMonAM06

[Garibashvili, Vazha.](#), MetalsTueAM08

[Gaune-escard.](#)

[Marcelle.](#), MoltenMonAM04

[Gaune-escard.](#)

[Marcelle.](#), MoltenMonAM08

[Gautier, Brice.](#), SISAMTueAM01

[Gavrilyuk, Alexander.](#), SISAMTueAM03

[Gergoric, Marino.](#), RareSession(poster)

[Ghuri.](#)

[Muhammad.](#), AdvancedMaterialsTueAM06

[Ghisleny.](#)

[Rudy.](#), AdvancedMaterialsSession(poster)

[Ghorbani.](#)

[Yousef.](#), MineralSession(poster)

[Ghosh.](#)

[Dipankar.](#), AdvancedMaterialsWedAM03

[Gloy, Gertruida.](#), MineralMonAM02

[Godibadze.](#)

[Bagrat.](#), AdvancedMaterialsMonAM08, AdvancedMaterialsWedAM04

[Gomez-marroquin, Mery-cecilia.](#), IronMonAM02

[Gong, Weiping.](#), CompositeThuPM05

[Gontijo De F., Carlos.](#), MineralTueAM01

[Gonzales, Thomas.](#), Non-

ferrousMonAM03, Non-ferrousMonAM07

[Gonzalez Vega, Gabriela](#)

[Maricela.](#), CompositeWedAM07

[Gopalakrishnan Nair.](#)

[Udayabhanu.](#), RecyclingSession(poster)

[Goral, Marek.](#), CoatingsTueAM06

[Gosselin, Manon.](#), MineralMonAM02

[Graham.](#)

[Shaun.](#), MineralMonAM03, MineralMonAM08

[Groessinger, Roland.](#), Session(poster)

[Guldamashvili.](#)

[Anzor.](#), AdvancedMaterialsThuAM04

[Guo, Xueyi.](#), Non-ferrousTueAM04

[Guzzo, Marcella F.](#), Non-ferrousMonAM04

H

[Hanagodimath.](#)

[S.m.](#), AdvancedMaterialsThuAM03

[Harel, Sylvie.](#), SISAMMonAM06

[Hashemi.](#)

[Abdolnabi.](#), EnergySession(poster)

[Hasolli.](#)

[Naim.](#), AdvancedMaterialsSession(poster)

[Haydary.](#)

[Juma.](#), AdvancedMaterialsTueAM03

[Helmreich.](#)

[Brigitte.](#), AdvancedMaterialsTueAM08

[Henni.](#)

[Amr.](#), AdvancedMaterialsTueAM06, AdvancedMaterialsWedAM03

[Hernández García.](#)

[Héctor.](#), CompositeThuAM02

[Hines, Wes.](#), EnergyMonPM05

[Hirano, Andre.](#), IronMonAM06

[Horky, Jelena.](#), SISAMMonAM04

[Horley.](#)

[Paul.](#), AdvancedMaterialsMonAM03

[Huang.](#)

[Lianzhong.](#), AdvancedMaterialsWedPM05

[Huseini, Idaver.](#), MiningSession(poster)

[Hussey, David.](#), MiningSession(poster)

[Hwang, Ji](#)

[Hyun.](#), AdvancedMaterialsMonAM07, AdvancedMaterialsMonAM07

I

[Ibrahim.](#)

[Hussameldin.](#), AdvancedMaterialsWedAM03

[Ibrahimi, Izet.](#), RecyclingWedAM08

[li.](#)

[Seiichiro.](#), AdvancedMaterialsThuAM03

[Imeri, Shefik.](#), MetalsTueAM07
[Iqbal,](#)
[Munawar.](#), AdvancedMaterialsThuAM01
[IvaniĀ., Andrei.](#), MineralTueAM04
[Ivasyshyn,](#)
[Andriy.](#), AdvancedMaterialsWedAM06

J

[Jacoby,](#)
[William.](#), EnergyTueAM04, EnergyWedAM03
[Jang,](#)
[Guneik.](#), CompositeSession(poster)
[Japaridze,](#)
[Levan.](#), AdvancedMaterialsWedAM02
[Jastrzebski, Maciej.](#), Non-ferrousMonAM07
[Javadi, Alireza.](#), MineralMonAM04
[Jaworska,](#)
[Lucyna.](#), AdvancedMaterialsWedAM06
[Jebahi,](#)
[S.](#), AdvancedMaterialsWedPM05, AdvancedMaterialsWedAM07
[Jeon, Seong-min.](#), AdvancedMaterialsSession(poster)
[Jiang,](#)
[Peng.](#), AdvancedMaterialsWedAM02
[Jin, Xiao.](#), AdvancedMaterialsTueAM04
[Judge, William.](#), MoltenMonAM01
[Jung,](#)
[Jaimyun.](#), AdvancedMaterialsMonAM07

K

[Kacani, Jorgaq.](#), CompositeWedAM04
[Kadaria,](#)
[Marina.](#), AdvancedMaterialsThuAM04
[Kakkar,](#)
[Vipan.](#), AdvancedMaterialsWedAM06
[Kallitsis,](#)
[Joannis.](#), AdvancedMaterialsSession(poster)
[Kamaha,](#)
[Valere.](#), AdvancedMaterialsWedAM03
[Kamburova,](#)
[Kamelia.](#), CompositeWedPM05
[Kanazawa,](#)
[Toshiyuki.](#), AdvancedMaterialsWedAM07
[Kandelaki, Aleksandre.](#), MetalsTueAM08
[Kang,](#)

[Hyungsuk.](#), AdvancedMaterialsWedAM03
[Karakiozaki,](#)
[Varvara.](#), AdvancedMaterialsWedPM05
[Karfidov,](#)
[Eduard.](#), MoltenSession(poster)
[Karpets,](#)
[Myroslav.](#), AdvancedMaterialsWedAM06, AdvancedMaterialsThuAM02
[Kato, Yoshiei.](#), Non-ferrousTueAM02
[Kawabata, Hirotooshi.](#), IronMonAM01
[Kazakovtseva,](#)
[Natalja.](#), MoltenSession(poster)
[Kebadze,](#)
[Zhiul.](#), EnvironmentalSession(poster)
[Keckes,](#)
[Laszlo.](#), AdvancedMaterialsMonAM08
[Kelmendi, Shyqri.](#), MineralTueAM02
[Kelmendi, Faton.](#), MineralTueAM02
[Keskes,](#)
[H.](#), AdvancedMaterialsWedAM07
[Khoshandam,](#)
[Elham.](#), AdvancedMaterialsSession(poster)
[Kim, Taek-soo.](#), RecyclingSession(poster)
[Kim, Chul Joo.](#), Non-ferrousWedAM03
[Kim, Young-soo.](#), RecyclingSession(poster)
[Kim, Dae-kyeom.](#), RecyclingSession(poster)
[Kim, Do Hyang.](#), RecyclingSession(poster)
[Kim, Jae H.](#), AdvancedMaterialsMonAM07, AdvancedMaterialsMonAM07
[Kim, Nack.](#), AdvancedMaterialsMonAM03, AdvancedMaterialsMonPM05, AdvancedMaterialsMonAM06, AdvancedMaterialsMonAM07, AdvancedMaterialsMonAM07
[Kim, H. S.](#), AdvancedMaterialsMonAM07
[Kim, Kwang-deuk.](#), AdvancedMaterialsSession(poster)
[Kim, Yail Jimmy.](#), AdvancedMaterialsTueAM01
[Kim, Jong-yun.](#), MoltenMonAM06
[Kim, Byung-soo.](#), Non-ferrousMonAM08
[Kipouros, Georges.](#), MoltenMonAM01

[Kirilov, Dimo.](#), Non-ferrousMonPM05
[Kluener, Thorsten.](#), AdvancedMaterialsWedAM06
[Kobe, Spomenka.](#), SISAMTueAM06
[Kochetov, Gennadiy.](#), AdvancedMaterialsMonAM07
[Kocsis, Tunde.](#), AdvancedMaterialsMonAM04
[Kolwas, Krystyna.](#), CoatingsTueAM07

[Kongoli, Florian.](#), SummitPlenaryMonAM01,
SummitPlenaryTueAM01,
SummitPlenaryWedAM01,
SummitPlenaryThuAM01,
IronMonAM03, IronMonAM04, MetalsTue
AM07, NonferrousMonAM04, MoltenMon
AM07, RecyclingWedAM08, CompositeT
huAM01

[Konishi, Hirokazu.](#), IronMonAM01
[Kotai, Laszlo.](#), AdvancedMaterialsMonAM04
[Kotowski, Slawomir.](#), CoatingsTueAM06
[Kouitat Njiwa, Richard.](#), SISAMMonAM01
[Koutsogeorgis, Demosthenes.](#), AdvancedMaterialsMonP
M05

[Kovacs, Andras.](#), SISAMTueAM06
[Koyanaka, Hideki.](#), AdvancedMaterialsThuAM02
[Kozlov, Pavel.](#), RecyclingWedAM01
[Kramer, Matthew.](#), AdvancedMaterialsSession(po
ster)
[Krasikov, Sergey.](#), Non-ferrousThuAM08
[Kraus, Libor.](#), MultiscaleSession(poster)
[Krexner, Gerhard.](#), SISAMMonAM04
[Krieg, Henning.](#), EnergyTueAM07
[Kropman, Daniel.](#), SISAMTueAM02
[Krystian, Maciej.](#), Session(poster)
[Kuksin, Alexei.](#), AdvancedMaterialsThuAM06
[Kuleshov, Sergei.](#), MoltenSession(poster)
[Kumar, B. V. Manoj.](#), CompositeThuAM03
[Kumar, Mahesh.](#), AdvancedMaterialsThuAM02

[Kunz, Willy.](#), CoatingsTueAM06
[Kushakova, Larissa.](#), MineralSession(poster)
[Kushitashvili, Zurab.](#), AdvancedMaterialsWedAM07
[Kuznetsov, Sergey.](#), MoltenSession(poster)
[Kwon, Yunik.](#), AdvancedMaterialsMonAM03, Ad
vancedMaterialsMonAM06
[Kwon, K.h.](#), AdvancedMaterialsMonAM03

L

[Ladeira, Ana Claudia.](#), Non-
ferrousWedAM01, Non-ferrousWedAM02
[Lambert, Timothy.](#), AdvancedMaterialsWedAM08
[Landin, Marilene.](#), IronMonAM06
[Langlois, Raymond.](#), MineralMonAM07
[Lanjewar, Mamata.](#), AdvancedMaterialsWedAM08
[Lanjewar, Ratnakar.](#), AdvancedMaterialsWedAM08,
AdvancedMaterialsThuAM06
[Lapicki, Gregory.](#), SISAMMonAM02
[Lavoie, Philippe.](#), Non-ferrousMonAM07
[Lee, Jinwoo.](#), BatteryMonAM03
[Lee, B. J.](#), AdvancedMaterialsMonAM07
[Lee, Jae-rang.](#), AdvancedMaterialsSession(poster)
[Lee, Kang-san.](#), AdvancedMaterialsSession(poster)
[Lee, Jae-cheon.](#), Non-ferrousMonAM08
[Leon-patino, Carlos A.](#), CompositeThuAM01
[Lepetit, Thomas.](#), SISAMMonAM06
[Leu, Ming.](#), BatteryMonPM05
[Li, Guoran.](#), BatteryMonAM08
[Li, Qizhen.](#), AdvancedMaterialsWedAM01
[Li, Jie.](#), BatteryMonPM05
[Li, Mengya.](#), BatteryMonAM06
[Liu, Sheng.](#), BatteryMonAM08
[Liu, Yihan.](#), MoltenTueAM04
[Liu, Ruijuan.](#), MathematicsWedAM03, Mathe
maticsWedAM04
[Liu, Xiangbing.](#), AdvancedMaterialsTueAM04
[Liu, Limin.](#), AdvancedMaterialsTueAM02

[Liu, Yifan.](#), AdvancedMaterialsWedPM05
[Loeffler, Markus.](#), CoatingsTueAM06
[Lopes Gomes, Jose](#)
[Emanuel.](#), IronTueAM03
[Lopez-cuevas.](#)
[Jorge.](#), CompositeThuAM02
[Lotter, Norman.](#), MineralMonAM01
[Lourenco.](#)
[Reimar.](#), AdvancedMaterialsTueAM08
[Loveless, Michael.](#), Non-ferrousMonAM07
[Lubej, Samo.](#), MineralTueAM04
[Lucas-girot.](#)
[A.](#), AdvancedMaterialsWedPM05
[Luidold, Stefan.](#), Non-ferrousWedAM04, RecyclingWedAM03
[Lunev.](#)
[Artem.](#), AdvancedMaterialsThuAM06
[Lutsyk, Vasily.](#), MetalsWedAM01, Non-ferrousThuAM07
[Lysenko, Valery.](#), MoltenSession(poster)

M

[Ma.](#)
[Yijing.](#), MathematicsWedAM03, MathematicsWedAM04
[Mabafokeng Masitha.](#)
[Irene.](#), EnergyWedAM02
[Macfarlane, Douglas.](#), MoltenMonAM03
[Magdalinovic.](#)
[Srdjana.](#), MoltenMonAM07
[Maikov, Mikhail.](#), MoltenSession(poster)
[Malapaka.](#)
[Chandrasekharam.](#), AdvancedMaterialsWedAM01
[Malipatil, Anil](#)
[Shantappa.](#), AdvancedMaterialsThuAM03
[Malyshev, Viktor.](#), MoltenSession(poster)
[Mamalis.](#)
[A.g.](#), AdvancedMaterialsThuAM02, AdvancedMaterialsThuAM01
[Mamanti Sealiete.](#)
[Pearl.](#), EnergyTueAM06
[Mamniashvili.](#)
[Grigor.](#), AdvancedMaterialsWedAM04
[Mamyachenkov.](#)
[Sergey.](#), RecyclingWedAM01
[Manickam.](#)
[Sivakumar.](#), AdvancedMaterialsThuPM05

[Manna.](#)
[Indranil.](#), AdvancedMaterialsThuPM05
[Mansson.](#)
[Martin.](#), EnergyMonAM03, SISAMMonAM03
[Maranas.](#)
[Janna.](#), SummitPlenaryThuAM03, BatteryMonAM01
[Marincic, Ivan.](#), Non-ferrousMonAM07
[Marinho Saraiva, Ana Flavia.](#), Non-ferrousWedAM02
[Marion, Christopher.](#), MineralMonAM06
[Markovic, Zoran.](#), MoltenMonAM07
[Marquis.](#)
[Fernand.](#), SummitPlenaryTuePM05, AdvancedMaterialsThuAM02, AdvancedMaterialsWedAM02, AdvancedMaterialsWedPM05, AdvancedMaterialsMonAM06, AdvancedMaterialsTueAM01
[Martin, Simon.](#), SISAMTueAM01
[Martinez.](#)
[Claudia.](#), NanomaterialsSession(poster)
[Martins.](#)
[Luisa.](#), AdvancedMaterialsSession(poster)
)
[Masuda.](#)
[Chitoshi.](#), CompositeWedAM03, CompositeWedAM06
[Matsubara.](#)
[Toshiaki.](#), AdvancedMaterialsMonAM02
[Matsukawa.](#)
[Yoshitaka.](#), AdvancedMaterialsTueAM03
[Mauntz, Manfred.](#), EnergyTueAM02
[Maxwell.](#)
[Omeje.](#), EnvironmentalWedAM02, EnvironmentalWedAM03
[Mayhew, Keith.](#), Non-ferrousMonAM01
[Medina Ramirez.](#)
[Adriana.](#), CompositeWedAM07, CompositeThuAM04
[Medvids, Artur.](#), SISAMTueAM02
[Mehboob.](#)
[Nasir.](#), CompositeSession(poster)
[Menzies, Andrew.](#), MineralMonAM02
[Merdjani, Redouane.](#), Non-ferrousMonAM04
[Mikadze, Omar.](#), MetalsTueAM08
[Mikadze, George.](#), MetalsTueAM08
[Mirijanashvili, Zurab.](#), MetalsTueAM08
[Mishra.](#)

[Amodini., CompositeThuAM07, CompositeThuAM08](#)

[Mitschke, Benjamin., MoltenMonAM03](#)

[Miyazawa.,](#)

[Kunichi., AdvancedMaterialsWedAM03, AdvancedMaterialsThuAM03](#)

[Mizukoshi, Tomoyuki., IronMonAM01](#)

[Mohamedali.,](#)

[Mohanned., AdvancedMaterialsWedAM03](#)

[Mohanty, Tanuja., CompositeThuAM08](#)

[Monastynov.,](#)

[Mykola., AdvancedMaterialsMonAM07](#)

[Moraes, Mateus Lanna Borges De., Non-ferrousWedAM02](#)

[Morales-rodriguez.,](#)

[Marissa., EnergySession\(poster\)](#)

[Morizono.,](#)

[Yasuhiro., AdvancedMaterialsThuAM03](#)

[Mosbahi.,](#)

[S., AdvancedMaterialsWedPM05, AdvancedMaterialsWedAM07](#)

[Moscardini.,](#)

[Emanuela., RecyclingWedAM07, RecyclingThuAM01](#)

[Moshchil.,](#)

[Viktor., AdvancedMaterialsWedAM06](#)

[Mossin, Susanne., MoltenMonAM02](#)

[Mostajeran Goortani.,](#)

[Behnam., AdvancedMaterialsSession\(poster\)](#)

[Mulligan.,](#)

[Catherine., AdvancedMaterialsMonAM08](#)

[Multani, Ravinder., MineralMonAM07](#)

[Munoz, Miguel Angel., Non-ferrousMonAM06](#)

[Murad, Ferid., SummitPlenaryWedAM02](#)

[Mustafa, Bajram., MineralTueAM02](#)

N

[Naito, Masaaki., IronMonAM01](#)

[Nam.,](#)

[Sunwoo., RecyclingSession\(poster\)](#)

[Napolitano.,](#)

[Ralph., AdvancedMaterialsSession\(poster\)](#)

[Nardaya.,](#)

[Yuri., AdvancedMaterialsThuAM04](#)

[Nasov.,](#)

[Ilija., AdvancedMaterialsWedAM07](#)

[Natarajan.,](#)

[Sundararajan., BatteryMonAM04](#)

[Naughton-duszova.,](#)

[Annamaria., CompositeWedAM02](#)

[Navarro Anaya.,](#)

[Cristian., CompositeThuAM04](#)

[Neacsu, Elena Ionela., MoltenMonAM04](#)

[Nebieridze.,](#)

[Tsira., AdvancedMaterialsThuAM04](#)

[Nelson, Donna., SummitPlenaryTueAM03](#)

[Nemoto.,](#)

[Yoshihiro., AdvancedMaterialsWedAM03](#)

[Neves.,](#)

[Manoela., AluminumSession\(poster\)](#)

[Nie.,](#)

[Zhuoyun., MathematicsWedAM03, MathematicsWedAM04](#)

[Nikiforov.,](#)

[Aleksey., MoltenSession\(poster\)](#)

[Nikitina.,](#)

[Evgeniya., MoltenSession\(poster\)](#)

[Nikolenko.,](#)

[Yury., AdvancedMaterialsTueAM04](#)

[Novosel, Barbara., SISAMTueAM06](#)

[Novoselova.,](#)

[Inessa., MoltenSession\(poster\)](#)

[Nowotnik, Andrzej., CoatingsTueAM06](#)

[Nushi, Violeta., EnergySession\(poster\)](#)

O

[Obrien, Edward Z..., RecyclingWedAM08](#)

[Ochoa, Kenly., Non-ferrousMonAM07](#)

[Ogawa.,](#)

[Fumio., CompositeWedAM03, CompositeWedAM06](#)

[Ohiomah, Ifije., EnvironmentalWedAM01](#)

[Ohler - Martins, Karla., IronTueAM01](#)

[Okura.,](#)

[Toshinori., AdvancedMaterialsMonAM02](#)

[Okura, Takahiko., Non-ferrousTueAM01](#)

[Oladoja, Nurudeen](#)

[Abiola., AdvancedMaterialsTueAM08](#)

[Olennikov, Alexey., IronMonAM03](#)

[Olivares-navarrete.,](#)

[Rene., AdvancedMaterialsTueAM02](#)

[Oliveira.,](#)

[Vitor., AdvancedMaterialsThuAM01](#)

[Oliveira.,](#)

[Tales., AdvancedMaterialsTueAM08](#)

[Oliveira, Cristovam Paes.](#), IronTueAM03
[Omer.](#),
 Abdeen., AdvancedMaterialsThuAM06
[Oncsik, Tamas.](#), MoltenMonAM02
[Ono, Hideki.](#), IronMonAM01
[Ostash.](#),
 Orest., AdvancedMaterialsWedAM06
[Oudadesse.](#),
 Hassane., AdvancedMaterialsWedPM05,
 AdvancedMaterialsWedAM07
[Ozbakkaloglu.](#),
 Togay., AdvancedMaterialsTueAM04
[Oziewicz.](#),
 Zbigniew., MathematicsWedAM07

P

[Pagnanelli.](#),
[Francesca.](#), RecyclingWedAM07, RecyclingThuAM01
[Panat, Rahul.](#), BatteryMonPM05
[Panic, Jovana.](#), MoltenSession(poster)
[Panshin, A..](#), RecyclingWedAM01
[Papovic.](#),
[Snezana.](#), MoltenSession(poster)
[Parameswaran, Krishna.](#), Non-ferrousTuePM05, Non-ferrousTueAM06
[Parast.](#),
[Mahour.](#), AdvancedMaterialsPoster14
[Parast.](#),
[Mahour.](#), EnvironmentalWedAM04, EnvironmentalWedPM05
[Parfenova, Maria.](#), MetalsWedAM01
[Park, Young](#)
[Ok.](#), AdvancedMaterialsSession(poster)
[Park.](#),
[G.bae.](#), AdvancedMaterialsMonAM03
[Park, Tae-hong.](#), MoltenMonPM05, MoltenMonAM06
[Park, Koshik.](#), EnergyMonAM07
[Park, Hyunsik.](#), Non-ferrousMonAM08
[Park, Jonghyun.](#), BatteryMonPM05
[Parsa.](#),
[Zahra.](#), AdvancedMaterialsThuAM04
[Patil, Sachin.](#), CoatingsTuePM05
[Patil, Rajendra.](#), RecyclingThuAM02
[Patil, Akshay.](#), CompositeThuAM06
[Patzschke, Max.](#), MineralMonAM02
[Pech-canul.](#),
[Martin.](#), CompositeThuAM01, Composite

ThuAM02
[Pech-canul.](#),
[Maximo.](#), CompositeThuAM02
[Pedersen.](#),
[Thomas.](#), AdvancedMaterialsTueAM01
[Peikrishvili.](#),
[Akaki.](#), AdvancedMaterialsMonAM08, AdvancedMaterialsWedAM04
[Pereira.](#),
[Denise.](#), AdvancedMaterialsTueAM08
[Pereira, Rafael.](#), IronMonAM07
[Pereira Cangani.](#),
[Maxwell.](#), IronMonAM06
[Pereira Cangani.](#),
[Maxwell.](#), IronMonAM07
[Petranikova.](#),
[Martina.](#), AdvancedMaterialsWedAM06
[Petrik, Jozef.](#), MetalsSession(poster)
[Peuser, Jorn.](#), EnergyTueAM02
[Phapale.](#),
[Kamlesh.](#), CompositeWedAM01
[Pinheiro Da Silva.](#),
[Bruno.](#), IronMonAM06
[Pint, Cary.](#), BatteryMonAM06
[Podsiadlo.](#),
[Marcin.](#), CompositeWedAM02
[Pong, Melvin.](#), Non-ferrousMonAM07
[Ponomar, Volodymyr.](#), Non-ferrousMonAM07
[Popescu, Ana-maria](#)
[Julieta.](#), MoltenMonAM04
[Potapov, Alexei.](#), MoltenSession(poster)
[Pourbafarani.](#),
[Somayeh.](#), CompositeWedAM08
[Pribulova, Alena.](#), MetalsSession(poster)
[Prikhna.](#),
[Tetiana.](#), AdvancedMaterialsWedAM06, AdvancedMaterialsThuAM02, AdvancedMaterialsMonAM07
[Proud.](#),
[William.](#), AdvancedMaterialsWedAM01

Q

[Qelaj, Mehmet.](#), EnergySession(poster)
[Qi.](#),
[Caixia.](#), AdvancedMaterialsSession(poster)
[Qurbanzade.](#),
[Tamil.](#), MineralSession(poster)

R

[Radeva, Tsetska.](#), CompositeWedPM05
[Rafiee](#),
[Roham.](#), AdvancedMaterialsSession(post
er)
[Ramirez-bon](#),
[Rafael.](#), AdvancedMaterialsMonAM03
[Ramos, Manuel.](#), Non-
ferrousTuePM05, Non-ferrousTueAM06
[Ranganathan](#),
[Vijayaraghavan.](#), MoltenMonAM03
[Rayasam](#),
[Venugopal.](#), RecyclingSession(poster)
[Recio, Ignacio.](#), Non-ferrousTueAM03
[Reis](#),
[Orimar.](#), AdvancedMaterialsTueAM08
[Rendon-angeles, Juan](#)
[Carlos.](#), CompositeThuAM02
[Retegan](#),
[Teodora.](#), EnergyMonAM06, RecyclingW
edAM02
[Reznichenko](#),
[Anna.](#), MineralSession(poster)
[Rezvanipour](#),
[Hassan.](#), MineralSession(poster)
[Riisager, Anders.](#), MoltenMonAM02
[Rios, Guillermo.](#), Non-ferrousMonAM02
[Rizaj, Musa.](#), RecyclingWedAM08
[Rockett, Angus.](#), SISAMMonPM05
[Rodil, Sandra](#)
[E.](#), AdvancedMaterialsTueAM02
[Rogl, Peter.](#), Session(poster)
[Rogl, Gerda.](#), Session(poster)
[Rokicki, Pawel.](#), CoatingsTueAM06
[Rosendahl](#),
[Lasse.](#), AdvancedMaterialsTueAM01
[Rostami](#),
[Alireza.](#), EnergySession(poster)
[Rowlands](#),
[Peter.](#), MathematicsWedAM02
[Rubinstein](#),
[Yuliy.](#), MineralSession(poster)
[Ruiz Camacho](#),
[Beatriz.](#), CompositeWedAM07, Composi
eThuAM04
[Rulyov, Niclola.](#), MineralSession(poster)
[Rund, Martin.](#), MultiscaleSession(poster)
[Rutkowski](#),
[Pawel.](#), CompositeWedAM02

[Rybenko, Inna.](#), IronMonAM03
[Rycerz, Leszek.](#), MoltenMonAM08

S

[Sadri, Afshin.](#), Non-ferrousTueAM08
[Safari](#),
[Nasser.](#), AdvancedMaterialsThuAM04
[Sagadin, Christoph.](#), Non-
ferrousWedAM04
[Salomao De Andrade](#),
[Alexandre.](#), MineralTueAM01
[Salyulev](#),
[Alexander.](#), MoltenSession(poster)
[Sanaia](#),
[Ekaterine.](#), AdvancedMaterialsThuAM04
[Santelli, Rodolfo.](#), Non-ferrousTueAM03
[Sar](#),
[Jaroslaw.](#), AdvancedMaterialsSession(po
ster)
[Sarkar](#),
[Supriya.](#), RecyclingSession(poster)
[Sarpal, Amrajit](#)
[Singh.](#), AdvancedMaterialsTueAM07
[Sassa](#),
[Yasmine.](#), AdvancedMaterialsTueAM07
[Sasson, Yoel.](#), RecyclingThuAM02
[Sawyer](#),
[Stephen.](#), MiningSession(poster)
[Sawyer](#),
[Stephen.](#), MiningSession(poster)
[Schafler, Erhard.](#), Session(poster)
[Scheepers, Emile.](#), MineralTueAM01
[Scheller, Samuel.](#), MineralMonAM02
[Schill, Leonard.](#), MoltenMonAM02
[Schvezov, Carlos](#)
[Enrique.](#), AdvancedMaterialsMonAM01
[Sechenov, Pavel.](#), IronMonAM03
[Seeman, Viktor.](#), SISAMTueAM02
[Seidel](#),
[Jan.](#), AdvancedMaterialsMonAM02
[Shaban, Abdul.](#), MoltenSession(poster)
[Shahriari, Bijan.](#), Non-ferrousMonAM07
[Shakhnin](#),
[Dmytro.](#), MoltenSession(poster)
[Shang](#),
[Chengjia.](#), AdvancedMaterialsTuePM05
[Shechtman, Dan.](#),
SummitPlenaryMonAM02
[Sheikh, Rashed.](#), MoltenMonAM03
[Shen, Chao.](#), BatteryTueAM02

[Shim, Myeong-shik.](#) AdvancedMaterialsMonAM07, AdvancedMaterialsMonAM07

[Shiroka Pula, Justina.](#) EnergySession(poster)

[Shirokov, Boris.](#) AdvancedMaterialsWedPM05

[Shumskiy, Viktor.](#) MetalsTueAM06

[Sichinava, Avtandil.](#) AdvancedMaterialsThuAM04

[Sidorov, Valeriy.](#) AdvancedMaterialsMonAM04

[Silva, Geovane.](#) IronMonAM06, IronMonAM07

[Silva, Gabriel.](#) Non-ferrousWedAM01

[Silva, S. Ravi P.](#) AdvancedMaterialsMonAM01

[Silva-bermudez, Phaedra.](#) AdvancedMaterialsTueAM02

[Singh, Rina.](#) AdvancedMaterialsTueAM08

[Smirnov, Leonid.](#) IronMonAM08

[Soare, Vasile.](#) MoltenMonAM04

[Soderznik, Marko.](#) SISAMTueAM06

[Soler, Maria A. G.](#) AdvancedMaterialsThuPM05

[Song, Ligu.](#) AdvancedMaterialsWedPM05

[Sorger, Christoph.](#) RecyclingWedAM03

[Sousa, Walinton.](#) AdvancedMaterialsTueAM08

[Souza, Erivelto.](#) IronTueAM03, AdvancedMaterialsTueAM08

[Spanring, Alfred.](#) Non-ferrousWedAM04

[Starikov, Sergei.](#) AdvancedMaterialsThuAM06

[Starkey, John.](#) MineralMonPM05

[Starostina, Alexandra.](#) AdvancedMaterialsWedAM06

[Steenari, Britt-marie.](#) AdvancedMaterialsWedAM06

[Stefanov, Sonja.](#) EnergyMonAM04, EnergyWedAM01

[Steinlechner, Stefan.](#) RecyclingWedPM05

[Stempfle, Philippe.](#) SISAMMonAM01

[Stocker, Susan.](#) Non-ferrousMonAM01

[Suh, Byeong-chan.](#) AdvancedMaterialsMonAM07, AdvancedMaterialsMonAM07

[Šuhaj, Patrik.](#) AdvancedMaterialsTueAM03

[Suschenko, Alla.](#) MoltenSession(poster)

[Sverdun, Vladimir.](#) AdvancedMaterialsWedAM06

[Swaminathan, Narasimhan.](#) BatteryMonAM04

[Szilagyi, Maria.](#) AdvancedMaterialsMonAM04

T

[Tahay, Pooya.](#) AdvancedMaterialsThuAM04

[Tahiraj, Naim.](#) MetalsTueAM07

[Takassi, Mohammad Ali.](#) EnergySession(poster)

[Talanchuk, Petro.](#) AdvancedMaterialsMonAM07

[Talukdar, Keka.](#) AdvancedMaterialsWedAM04

[Tan, Guolong.](#) AdvancedMaterialsTueAM02

[Tanaka, Yumi.](#) AdvancedMaterialsWedAM03, AdvancedMaterialsThuAM03

[Tangde, Vijay.](#) EnergyTueAM03, EnergyTuePM05

[Tavadze, George.](#) AdvancedMaterialsMonAM08

[Tear, Gareth.](#) AdvancedMaterialsWedAM01

[Teichert, Christian.](#) SISAMTuePM05

[Teshima, Katsuya.](#) BatteryTueAM01, BatteryTueAM03

[Thadhani, Naresh.](#) AdvancedMaterialsTueAM03

[Thakare, Sandeep.](#) AdvancedMaterialsMonAM03

[Thanedar, Azhar.](#) MetalsSession(poster)

[Thomassen, Peter L.](#) MoltenMonAM02

[Tinoco Falero, Edelink Efrain.](#) IronTueAM01

[Tkachev, Nikolay.](#) MoltenSession(poster)

[Tomoshige,](#)

[Ryuichi..](#), AdvancedMaterialsThuAM03
[Toor..](#)
[Sagib..](#), AdvancedMaterialsTueAM01
[Toplak, Sebastian..](#), MineralTueAM04
[Tordoff, Benjamin..](#), MineralMonAM08
[Toro..](#)
[Luigi..](#), RecyclingWedAM07, RecyclingTh
uAM01
[Toshio..](#)
[Konno..](#), AdvancedMaterialsWedAM03
[Tot, Aleksandar..](#), MoltenSession(poster)
[Tot, Aleksandar..](#), MoltenTueAM02
[Trajkovska Broach..](#)
[Anita..](#), AdvancedMaterialsWedAM07
[Trajkovska Petkoska..](#)
[Anka..](#), AdvancedMaterialsWedAM07
[Trask, Nathaniel..](#), BatterySession(poster)
[Trchounian..](#)
[Armen..](#), AdvancedMaterialsMonAM08
[Trchounian..](#)
[Karen..](#), AdvancedMaterialsMonAM08
[Trtic-petrovic, Tatjana..](#), MoltenTueAM02
[Tseplyaev..](#)
[Vasily..](#), AdvancedMaterialsThuAM06
[Tsoulka, Polyxeni..](#), SISAMMonAM08
[Tsyganenko..](#)
[Alexey..](#), AdvancedMaterialsTueAM02
[Tsymbal, Valentin..](#), IronMonAM03
[Tunsu, Cristian..](#), RecyclingWedAM02
[Turna, Tamer..](#), SummitPlenaryMonAM04
, EnergyTueAM01
[Tyagi, Mayank..](#), EnergyTueAM08

U

[Uddin, Md. Azhar..](#), Non-ferrousTueAM02
[Usui, Tateo..](#), IronMonAM01

V

[Valdez, Socorro..](#), CompositeThuAM02
[Vassiliev..](#)
[Valery..](#), MoltenSession(poster)
[Vastag, Gyongyi..](#), MoltenSession(poster)
[Verma, Vikas..](#), CompositeThuAM03
[Vetrova, Daria..](#), MoltenSession(poster)
[Vickress, Dustin..](#), Non-ferrousMonAM07
[Vidigal, Bruna..](#), Non-ferrousWedAM01
[Vieira, Lucas C..](#), Non-ferrousMonAM04
[Vilar, Rui..](#), AdvancedMaterialsThuAM01
[Von Kruger, Paulo..](#), IronTueAM02

Von Sch"tele,

[Joachim..](#), RecyclingWedAM06
[Vorob'eva, Vera..](#), MetalsWedAM01
[Vorobiev..](#)
[Pavel..](#), AdvancedMaterialsMonAM03
[Vorobiov..](#)
[Yurii..](#), AdvancedMaterialsMonAM03
[Vovkotrub..](#)
[Emma..](#), MoltenSession(poster)
[Vozga, Indrit..](#), CompositeWedAM04
[Vraneš, Milan..](#), MoltenTueAM02
[Vucinic, Dean..](#), MathematicsWedAM01

W

[Wagner, Christoph..](#), Non-
ferrousWedAM04
[Wakahara..](#)
[Takatsugu..](#), AdvancedMaterialsWedAM0
3
[Wan..](#)
[Yiyang..](#), AdvancedMaterialsTuePM05
[Wang, Zhi..](#), Non-ferrousThuPM05
[Wang, Qinqing..](#), Non-ferrousTueAM04
[Wang..](#)
[Qingguo..](#), MathematicsWedAM03, Mathe
maticsWedAM04
[Wang..](#)
[Xitao..](#), AdvancedMaterialsTueAM04, Adv
ancedMaterialsWedAM08
[Wang..](#)
[Engang..](#), AdvancedMaterialsTueAM07
[Wang, Ming..](#), BatteryMonAM07
[Wang, Zhoucheng..](#), SISAMTueAM07
[Waters..](#)
[Kristian..](#), MineralMonAM06, MineralMonA
M07
[Watson, George..](#), MiningSession(poster)
[Wegscheider..](#)
[Stefan..](#), RecyclingWedPM05
[Wei, Rocky\(zhong-
ling\)..](#), RecyclingWedAM06
[Wei-guangdiao..](#)
[Eric..](#), AdvancedMaterialsThuAM04
[Welz, Zach..](#), EnergyMonPM05
[Wencka, Magdalena..](#), SISAMTueAM04
[Wilde, Ryan..](#), Non-ferrousMonAM07
[Williams, Wesley..](#), EnergyMonAM02

X

[Xia, Zhenhai.](#) AdvancedMaterialsTuePM05
[Xia, Wenwen.](#) AdvancedMaterialsWedPM05
[Xie, Jianxin.](#) BatteryTueAM02
[Xu, K.y.](#) MultiscaleThuAM02
[Xu, Qishu.](#) AdvancedMaterialsTueAM02
[Xue, Fei.](#) AdvancedMaterialsTueAM04, AdvancedMaterialsWedAM08

Y

[Yakornov, Sergey.](#) RecyclingWedAM01
[Yamada, Tetsuya.](#) BatteryTueAM01
[Yamamoto, Takaiku.](#) RecyclingWedAM04
[Yan, Shuyang.](#) Non-ferrousThuAM06
[Yang, Young-cheol.](#) IronTueAM04
[Yang, Fugian.](#) BatteryMonAM02, AdvancedMaterialsMonAM06
[Yao, Li.](#) AdvancedMaterialsWedPM05
[Yeon, Jei-won.](#) MoltenMonAM06
[Yildirim, Robert Yuksel.](#) SummitPlenaryWedAM03
[Ying, Wai Lai.](#) Non-ferrousTueAM08
[Yonath, Ada.](#) SummitPlenaryTueAM02
[Yoon, Ho-sung.](#) Non-ferrousWedAM03
[Yoon, Sangmoo.](#) CompositeSession(poster)
[Yoshitake, Masaru.](#) AdvancedMaterialsThuAM03
[Yue, Yanmei.](#) MultiscaleThuAM02

Z

[Zabierowski, Pawel.](#) SISAMMonAM07
[Zadehnazari, Amin.](#) EnergySession(poster)
[Zagar, Kristina.](#) SISAMTueAM06
[Zamunér Filho, Antonio.](#) Non-ferrousThuAM04
[Zdolsek, Nikola.](#) MoltenTueAM02
[Zec, Nebojsa.](#) MoltenSession(poster)
[Zehetbauer, Michael J.](#) SummitPlenaryWedPM05, SISAMMonAM04
[Zelenaya, Anna.](#) Non-ferrousThuAM07
[Zettsu, Nobuyuki.](#) BatteryTueAM01
[Zhang,](#)

[Mei.](#) MultiscaleThuAM01, BatteryTueAM02
[Zhao, Rui.](#) AdvancedMaterialsWedPM05
[Zheng, Junrong.](#) AdvancedMaterialsThuPM05
[Zheng, Jim.](#) BatteryTueAM02
[Zhou, Lin.](#) AdvancedMaterialsSession(poster)
[Zimych, Tetiana.](#) AdvancedMaterialsWedAM06
[Zschech, Ehrenfried.](#) CoatingsTueAM06

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