



**CONSTANTINOS G. VAYENAS**  
*Curriculum Vitae*

**Professor Emeritus, University of Patras**  
**Honorary Professor, Aristotle University of Thessaloniki**  
**Member, Academy of Athens, Division of Natural Sciences**  
**Foreign Member, NAE, USA**

**Born:** September 22, 1950 in Athens, Greece

**Education:**

Diploma in Chemical Engineering, NTU Athens, 1973  
PhD, University of Rochester, USA, 1976

**Professional Experience:**

Teaching and Research Assistant, University of Rochester, 9/1/73-9/1/76  
Assistant Professor of Engineering and Applied Science, Yale University, 9/1/76-9/1/77  
Assistant Professor of Chemical Engineering, M.I.T., 9/1/77-9/1/78  
Dupont Assistant Professor of Chemical Engineering, M.I.T., 9/1/78-6/1/80  
J.R. Mares Assistant Professor of Chemical Engineering, M.I.T., 6/1/80-6/1/81  
Associate Professor of Chemical Engineering, M.I.T. 6/1/81-6/1/83  
Professor of Chemical Engineering, University of Patras, Greece, 1981-present  
Alexander von Humboldt Fellow, University of Karlsruhe, 1991  
Visiting Professor, Yale University, 1991-92  
Invited Professor, EPFL, Lausanne, 1994  
Invited Professor, Université de Lyon, 2007

**Administrative Experience:**

Dean of Engineering, University of Patras, 1983-85  
Chairman of Chemical Engineering, University of Patras 1986-89 and 1993-95  
Vice-President of DIKATSA (Hellenic Bureau for recognizing the equivalence of foreign academic degrees), 1988-89  
Vice-Director, ICE/HT, 1985-87 & 1989-91  
Vice-President, National Hellenic Research Foundation, EIE, 1994-1995  
President, National Hellenic Research Foundation, 1995-1996  
President of the Hellenic Catalysis Society, 1993-1995  
Vice-Rector, University of Patras, 1997-2003  
Member of the European Science and Technology Assembly (ESTA), 1997-2000  
Secretary and Treasurer of the International Society for Solid State Ionics, 1998-2000  
Member and Vice President of the National Research Council of Greece, 2001-2004  
Chairman of Division 5, ISE, 2007  
Member, Academy of Athens, Chair of Chemical Sciences, 2010 -

### **Research Interests:**

Electrochemistry, electrocatalysis, heterogeneous catalysis, promotion, electrochemical promotion of catalysis, fuel cells, chemical cogeneration in fuel cells, chemical and electrochemical kinetics and reaction engineering, physical chemistry, proton tunnelling, mathematical modelling of chemical and physical systems. Gravity, Special Relativity, Thermodynamics of Elementary Particles, Rotating Lepton Model, Thermodynamics and Catalysis of Baryogenesis, Mass generation via Gravitational Confinement of Neutrinos.

### **Main Awards/Honors:**

Member of the National Academy of Engineering, NAE, USA, 2017  
Special Issue of Topics in Catalysis: Heterogeneous Catalysis and Electrochemistry, dedicated to Professor Constantinos G. Vayenas, 2015  
Honorary Doctorate Degree, Aristotle University of Thessaloniki, 2015  
Member of the Academy of Athens, 2010 -  
Fellow of the International Society of Electrochemistry (ISE) 2005  
Outstanding achievement Award of the High Temperature Division of the Electrochemical Society, 1996  
Empirikion Foundation Award in Chemistry, 1994  
Academy of Athens Award in Chemistry, 1992  
Wason Medal for Materials Research, American Concrete Institute, 1992  
Alexander von Humboldt Fellowship, 1990  
B.F. Dodge Lecture, Yale University, 1989, 2005  
H. and C. Dreyfus Teacher-Scholar Award, 1981  
Outstanding Faculty Award, Dept. of Chemical Engineering, M.I.T. 1979 & 1981  
E.H. Hooker Fellowship, University of Rochester, 1975  
Greek State Prize for highest average in the National Technical University, 1972  
Greek State Fellowship, (IKY) 1969-73  
Greek State Fellowship (IKY) for 2<sup>nd</sup> highest average in the entrance examination of the National Technical University, 1<sup>st</sup> in Chemical Engineering, 1968  
Praise of the Hellenic Mathematics Association, 1968

### **Editorships:**

Modern Aspects of Electrochemistry, Editor, 2001-  
Ionics, Associate Editor, 1999-2004  
Solid State Ionics, Guest Editor, 1999-2000  
Topics in Catalysis, Guest Editor, 2006-2007  
Journal of Applied Electrochemistry, Guest Editor, 2007  
Catalysis Today, Guest Editor, 2009

### **Memberships of Editorial Boards:**

Topics in Catalysis  
Catalysis Letters  
Ionics  
Journal of New Materials for Electrochemical Systems  
Chemical Industry  
ChemElectroChem

### **Organization of International Conferences:**

*Member of the organizing or advisory committee of:*

- 1<sup>st</sup> Panhellenic Catalysis Symposium, Patras 1987
- 2<sup>nd</sup> Panhellenic Catalysis Symposium, Patras 1989
- 2<sup>nd</sup> International Conference on Solid Oxide Fuel Cells, Athens, 1991, Conference co-Chairman

1<sup>st</sup> International Conference on Electrocatalysis, Ferrara 1993  
1<sup>st</sup> Euroconference on Solid State Ionics, Zakynthos 1994  
2<sup>nd</sup> Euroconference on Solid State Ionics, Portugal 1995  
4<sup>th</sup> Panhellenic Catalysis Symposium, Papingo 1995  
3<sup>rd</sup> Euroconference on Solid State Ionics, Sardinia 1996  
192<sup>nd</sup> Annual Meeting of the Electrochemical Society, Paris, 1997  
4<sup>th</sup> International Conference on Spillover, Dalian, China, 1997  
3<sup>rd</sup> World Congress on Oxidation Catalysis, San Diego, USA, 1997  
12<sup>th</sup> International Conference on Solid State Ionics, Chalkidiki, Greece, 1999, Conference Chairman  
50<sup>th</sup> International Society of Electrochemistry, (ISE) Meeting, Pavia, Italy, 1999  
3<sup>rd</sup> International Symposium on Electrocatalysis, Portoroz, Slovenia, 2000  
12<sup>th</sup> International Congress on Catalysis, Granada, Spain, 2000  
55<sup>th</sup> International Society of Electrochemistry (ISE) Meeting Thessaloniki, 2004  
19<sup>th</sup> North American Catalysis Conference, Philadelphia, 2005

**Funded Research:** ~6,200,000 Euro

**Refereed Publications in Journals:** 270 (of which 4 in Science and Nature)

**Books authored:** 3, including “*Electrochemical Activation of Catalysis: Promotion, Electrochemical Promotion and Metal-Support Interactions*” C.G. Vayenas, S. Bebelis, C. Pliangos, S. Brosda, and D. Tsiplakides, Kluwer/Plenum Press, New York (2001) and “*Gravity, special relativity and the strong force: A Bohr-Einstein-de Broglie model for the formation of hadrons*”, C.G. Vayenas, S.N.-A. Souentie, Springer, New York, (2012).

**Books edited:** 8, including “*Catalysis and Electrocatalysis at Nanoparticles Surfaces*” (A. Wieckowski, E. Savinova & C.G. Vayenas, eds.), Marcel Dekker Inc., New York - Basel (2003).

**Chapters in Books:** 12

**International Patents:** 12

**Citations by others:** ~ 6.145 (10.1.2019, ISI Web of Science)

**Citations:** 15628 (scholar google)

**h-index:** 52 (ISI Web of Science), 66 (Scholar google)

**Invited Seminars in Universities and Research Centers:** 111

**Plenary, Keynote, Award and Invited Lectures in International Conferences:** 78

**PhD students supervised:** 38 (18 in Academia)