

BIODATA

Professor Michel CHE

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Paris, March 2011

NAME Michel CHE born 29 December 1941, Lyon, France

EDUCATION

1964 Chemical Engineering degree from Ecole Supérieure de Chimie Industrielle de Lyon
 1968 Docteur ès Sciences degree from Université de Lyon
 1969-1970 NATO Postdoctoral Fellow, Princeton University
 1970-1971 AEC Research Associate, Princeton University

EMPLOYMENT

A. 1964-1968 Attaché de Recherche, National Center for Scientific Research (CNRS), Institute of Catalysis, Villeurbanne, France
 B. 1968-1974 Chargé de Recherche, National Center for Scientific Research (CNRS), Institute of Catalysis, Villeurbanne, France
 C. 1972-1983 During this period, regular Visiting Senior Scientist during the summer, Atomic Energy Research Establishment, Harwell, UK
 D. 1974-1975 Maître de Recherche, National Center for Scientific Research (CNRS), Institute of Catalysis, Villeurbanne, France
 E. 1975-1976 Associate Professor, Université Pierre et Marie Curie, Paris, France
 F. 1976-1992 Professor, Université Pierre et Marie Curie, Paris, France
 G. 1992-Present Distinguished Professor, Université Pierre et Marie Curie, Paris, France
 H. 1995-Present Professor, Boris Imelik Chair of Surface Reactivity and Catalysis, Institut Universitaire de France, Paris, France

RESPONSABILITIES

1976-1980 Elected Member of National Committee (France)
 1980-1984 Elected Member of National Committee (France)
 1989-1994 Elected President of the Catalysis Division, French Chemical Society
 1990-1995 Elected President-Founder of the European Federation of Catalysis Societies, EFCATS
 1991-1995 Elected Member of National Committee (France)
 1992-1995 Elected Vice-President of the Council of the International Congress on Catalysis
 1995-2000 Elected Member of National Committee (France)
 1995-1996 Acting President-Elect of the Council of the International Congress on Catalysis
 1996-2000 President-Elect of the International Association of Catalysis Societies (formerly the Council of the International Congress on Catalysis)
 1997-present Appointed Scientific Councilor of Institut Français du Pétrole (France)
 1999-present Member of the International Review Committee of the State Key Laboratory of Catalysis, Dalian Institute of Chemical Physics, Dalian (People's Republic of China)
 2000-2004 President of the International Association of Catalysis Societies

- (formerly the Council of the International Congress on Catalysis)
- 2002-2005 Chairman of the Department of Inorganic Chemistry, Université Pierre et Marie Curie, Paris (France)
- 2002 Member of Selection Committee of 2 Professors, University of Cyprus, Nicosia (Cyprus)
- 2002-2005 Member of the Selection Committee for the best PhD prepared at the French Institute of Petroleum, IFP, (France)
- 2003 Member of Selection Committee of 1 Professor, University of Vienna, (Austria)
- 2003 Member of the Selection Committee for the Research Scientific Prize "Le Monde" (France)
- 2004-2007 Member of the International Advisory Board of the Centre for the Theory and Application of Catalysis, Belfast (UK)
- 2005 Member of the Review Committee of Foundation for Strategic Environmental Research (MISTRA) for "Energy efficient reduction of particles and NOx from vehicle emissions", Stockholm (Sweden)
- 2005-2008 Member of the Awards Committee, French Chemical Society
- 2005-present Member of the Review Committee of the Institute of Catalysis and Surface Chemistry, Polish Academy of Sciences, Krakow, Poland
- 2005-present Member of the Selection Committee for the PhD Prize Yves Chauvin, French Institute of Petroleum, IFP, (France)
- 2006-present President of Academic Review Committee of the State Key Laboratory of Catalysis (SKLC), Chinese Academy of Sciences, Dalian (China)
- 2007-present Elected Chairman of Chemistry Section Committee, Academia Europaea
- 2007-2009 Elected Vice-President of the French Chemical Society
- 2009-present Trustee of Academia Europaea

HONORS and named LECTURES

- 1972 Van't Hoff Award Royal Netherlands Academy of Sciences (The Netherlands)
- 1975 Scientific Foundation L. Chatin Award (France)
- 1986 Japanese Society for the Promotion of Science Lectureship (Japan)
- 1992 Member of the Academia Europaea
- 1993 Foreign Member of the Hungarian Academy of Sciences (Hungary)
- 1993 Medal of the City of Montpellier (France) at the occasion of the first European Congress on Catalysis (EuropaCat I) organised in this city
- 1995 Distinguished Lecturer "Frontiers in Chemical Research", Texas A & M University (USA)
- 1995 Professor at the Institut Universitaire de France
Boris Imelik Chair of Surface Reactivity and Catalysis (France)
- 1995 Pierre Sue Award, French Chemical Society (France)
- 1995 Honorary Member of Romanian Catalysis Society (Romania)
- 1997 Maria Sklodowska-Curie and Pierre Curie Award, French and Polish Chemical Societies (France and Poland)
- 1997 Von Humboldt - Gay-Lussac Award, Alexander von Humboldt Foundation (Germany)
- 1998 Japanese Society for the Promotion of Science Lectureship (Japan)

- 1999 Alexander Joannides Grand Prize of Chemistry,
French Academy of Sciences (France)
- 2000 Doctor Honoris Causa, at the occasion of the 600th anniversary of the
Jagellonian University, Cracow (Poland)
- 2000 Contemporary Inorganic Chemistry - II Lecturer, Texas A&M
University, College Station, Texas, (USA)
- 2001 Doctor Honoris Causa, at the occasion of the 70th anniversary of the
Technical University of Lisbon, Lisbon (Portugal)
- 2002 Professor Honoris Causa, University of Bucharest, Bucharest (Romania)
- 2002 Member of the German Academy of Sciences Leopoldina, at the occasion of
its 350th anniversary (Germany)
- 2003 Elected Member of Chemistry Section Committee, Academia Europaea
- 2003 Antonio Giuseppe Nasini Lecture, University of Turin, Turin (Italy)
- 2003 Elected Honorary Member of the Italian Chemical Society at the occasion
of its XXI Congress honoring the 100th Birthday of G. Natta and the
40th Anniversary of its Nobel Prize (Italy)
- 2003 Guest Editor (with W.N. Delgas and A.T. Bell) of the 40th Anniversary
Commemorative Issue (the only one thus far) of the Journal of Catalysis
- 2004 François Gault Lectureship at the occasion of EuropaCatVI and of the
10th Anniversary of the foundation of the European Federation of Catalysis
Societies, EFCATS, Innsbrück (cf lectures, p. 8 & 9) (Austria)
- 2004 Sabatier Medal at the occasion of the 150th Anniversary of Sabatier's
Birthday, University of Toulouse (France)
- 2005 Marcel Prettre Lecture, CPE and University of Lyon, (France)
- 2008 Award and Gold Medal for International Scientific Cooperation of the
Chinese Academy of Sciences (People's Republic of China), Beijing
- 2009 Friendship Award and Medal, State Administration of Foreign Experts
Affairs, at the occasion of 60th Anniversary of the People's Republic of
China, Beijing, (China)
- 2009 International Science and Technology Cooperation Award and Medal
of the People's Republic of China, Beijing, (China)
- 2009/2010 Centenary Lectureship of the Royal Society of Chemistry
(cf lectures, p. 9 & 11) (UK)
- 2010 Special Lecture, Honorary Professorship, Osaka Prefecture University
(Japan)
- 2010 Foreign Member, Polish Academy of Arts and Sciences (Poland)
- 2011 Grignard-Wittig Lectureship from the German Chemical Society in
association with the French Chemical Society (Germany)

PROFESSORSHIPS

- 1978 Invited Professor, Institute of Chemistry, Beijing,
Chinese Academy of Sciences, (People's Republic of China)
- 1980 Invited Professor, University of Peking, Beijing,
Chinese Academy of Sciences, (People's Republic of China)
- 1983 Invited Professor, University of Szeged, and Institute of Isotopes
Budapest, Hungarian Academy of Sciences (Hungary)
- 1986 Invited Professor, Tokyo Institute of Technology, Tokyo,
Japanese Society for the Promotion of Science (Japan)
- 1987 Honorary Professor, Shanxi University,
Tai Yuan (People's Republic of China)

1995	Distinguished Lecturer, Texas A & M University (USA)
1995	Invited Professor, Chemistry Research Promotion Centre, National Science Council, Taipei (Taiwan)
1995	Honorary Professor, Tianjin University, Tianjin (People's Republic of China)
1996	Invited Professor, University of Turin (Italy)
1996	Guest Professor, Peking University, Beijing (People's Republic of China)
1996	Guest Professor, Tai Yuan University of Technology (People's Republic of China)
1998	Invited Professor, Osaka Prefecture University, Osaka, Japanese Society for the Promotion of Science (Japan)
1998, 1999, 2002	Visiting Professor, Ludwig-Maximilians University, Munich (Germany)
2001, 2002	Invited Professor, University of Bucharest (Romania)
2005	Honorary Professor, Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Dalian, China
2008	Invited Professor, Osaka Prefecture University, Sakai (Japan)
2010	Honorary Professor, Osaka Prefecture University, Sakai (Japan)

EDITORSHIPS

Structural, electronic and catalytic properties of metals: a special issue of the
Journal de Chimie Physique

M. CHE et C. NACCACHE (**Guest Editors**)

J. Chim. Phys., 1981, 78, 857.

Adsorption and catalysis on oxide surfaces in honour of A.J. Tench

M. CHE et G.C. BOND, Eds,

Studies in Surface Science and Catalysis, Volume 21,

Elsevier, Amsterdam, 1984, 442 p.

A special issue on "Trends in surface chemistry and catalysis" in honour of F.S. Stone

E. GARRONE and M. CHE (**Guest Editors**)

Res. Chem. Interm., 1999, 25, Part 1, 1-130; Part 2, 131-242

A special issue on "Trends in surface chemistry and catalysis" in honour of F.S. Stone

E. GARRONE and M. CHE (**Guest Editors**)

Topics Catal., 1999, 8, 141-292

A special issue on "Solid State Chemistry, Surface Science and Catalysis"

in honour of F. Solymosi

L. GUCZI and M. CHE (**Guest Editors**)

Topics Catal., 2002, 20, 1-139

A special issue "Oxidation Catalysis: Present State of the Art and Its Perspective"

M. BAERNS, M. CHE, G. HUTCHINGS, M. MUHLER and R. SCHLOEGL

(**Guest Editors**)

Topics Catal., 2002, 21, 1-106

40th Anniversary Commemorative Issue of the Journal of Catalysis
 W.N. DELGASS, M. CHE and A.T. BELL (**Guest Editors**)
 J. Catal., 2003, 216, 1-517

EDITORIAL ADVISORY BOARDS

- Journal of Catalysis
- Journal of the Chemical Society, Faraday Transactions (up to 1994)
- Critical Reviews in Surface Chemistry
- Catalysis Reviews
- European Journal of Solid State and Inorganic Chemistry (up to 1991)
- Catalysis Letters
- Research on Chemical Intermediates
- Bulletin de la Société Chimique de France (Associate Editor, up to 1997)
- Topics in Catalysis
- Catalysis Surveys from Japan (1997-2002)
- Catalysis Surveys from Asia (from 2003)
- Industrial Catalysis News
- Encyclopedia of Catalysis
- The Chemical Record, Japan (Foreign Editor for Interdisciplinary Field in Chemistry) (2001-present)
- Accounts of Chemical Research (2001-2003)
- Applied Magnetic Resonance (2001-present)
- Advances in Catalysis (2004-present)
- Chinese Journal of Catalysis (2007- present)
- Central European Journal of Chemistry (2010-present)
- Catalysis Science & Technology, Royal Society of Chemistry (2010-present)

RESEARCH ACTIVITIES

Professor Che works in the field of surface reactivity in relation to catalysis phenomena. The main objective of his research is to establish a methodology to unravel the phenomena occurring during the successive steps of catalyst preparation, adsorption and catalysis, mostly in the case of supported catalysts, be they real or model catalysts.

To this end, he has developed a molecular approach based on the use of transition metal complexes, stable isotopes, and suitable spectroscopies to systematically study the phenomena developing at the liquid-solid, gas-solid, and solid-solid interfaces. Thanks to this approach and experiments carefully designed to identify and isolate the key parameters controlling "metal-support" interactions, he has been able to show that catalyst preparation can best be understood in the conceptual framework of several fields of chemistry, and in particular colloid science, electrochemistry, supramolecular chemistry, coordination chemistry, geochemistry, solid state chemistry and surface science. In relation to each of those fields, he has been able to evidence the role played by the oxide support : charged/neutral surface, counter-ion, receptor, ligand, reactant and solid solvent.

An important part of his research concerns the application of coordination chemistry theories to the liquid-solid interface in order to prepare systems with controlled "ion-support" interactions and to evidence the elementary steps which occur in catalyst preparation and later in catalytic reactions. This has led to the emergence of the field of interfacial coordination chemistry.

While his earlier studies have largely considered this chemistry and the role of the oxide support as ligand, thus bridging the gap between molecular chemistry and solid state

chemistry, and between homo- and heterogeneous catalysis, his latest research concentrates on the relevance of geochemistry to catalyst preparation and the role of the oxide support as reactant. The major contribution of his geochemistry approach has been to improve our understanding of the formation of mixed species or phases on oxide supports, under conditions where the latter can dissolve.

The systems obtained can themselves constitute catalysts in their oxidized state or be used as precursors to obtain, after reduction of the latter, supported mono-or bimetallic catalytic materials. Recent results suggest that the use of the so-called chemical glue, formed of ions in strong interaction with the support and capable to stabilise metal particles, can lead to an *a priori* control of the physico-chemical properties of supported mono or bimetallic particles.

His work to prepare catalysts with specific acidic and redox properties largely contributed to control the speciation of elements, thereby facilitating the access to more defined single site catalysts. These studies were extended further to investigate the coordination chemistry of anions (oxide and hydroxyl groups) at basic oxide surfaces which, in concert with transition metal ions, are key to activate small organic/inorganic molecules, leading to a clear distinction between thermodynamic Bronsted basicity and kinetic reactivity.

His research work has led to *ca.* 450 publications in the open literature and 4 patents.

PLENARY AND NAMED LECTURES* IN INTERNATIONAL/FOREIGN MEETINGS

* some have been presented as Opening or Guest lectures; lectures given as Keynote lectures have been indicated.

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| 1979 | 2nd International Symposium on Magnetic Resonance in Colloid and Interface Science, Menton, France, July 1979 |
| 1980 | Post Congress Symposium of the 7th International Congress on Catalysis. A new approach to preparation and characterization of heterogeneous catalysts, Sapporo, Japan, July 1980 |
| 1983 | 3rd International Symposium on Magnetic Resonance in Colloid and Interface Science, Torun, Poland, July 1983 |
| 1984 | International Symposium on Adsorption and Catalysis on Oxide Surfaces (to honour the late Dr. A.J. TENCH), Brunel, United Kingdom, June 1984 |
| 1986 | IVth International Symposium on Magnetic Resonance in Colloid and Interface Science, Münster, Germany, July 1986 |
| 1988 | French-Japan Seminar on Catalysis. Successful design of catalysts. Future requirements and development. Worldwide Catalysis Seminar, Paris, France, July 1988 |
| 1988 | Gordon Research Conference on "Chemistry at Interfaces", Meriden, United States, July 1988 |
| 1989 | 22nd International ESR Conference, Sheffield, U.K, April 1989 |
| 1990 | Autumn Meeting of the Catalysis Society of Japan
Hiroshima, Japan, October 1990 |
| 1992 | 10th International Congress on Catalysis, Budapest, Hungary, July 1992 |
| 1994 | TOCAT 2, Second Tokyo Conference on Advanced Catalytic Science and Technology, Tokyo, Japan, August 1994 |
| 1995 | Distinguished Lectures "Frontiers in Chemical Research", Texas A & M University, United States, April 1995 |

- 1995 13th Symposium on Catalysis & Reaction Engineering, Taipei, Taiwan, June 1995
- 1995 Catalysis Science and Technology, 1st GCYCS, Tianjin, China, September 1995
- 1996 Rideal Conference 1996 on Catalysis, Dundee, Scotland, March 1996
- 1996 8th National Chinese Conference on Catalysis, Chinese Chemical Society, Xiamen, China, October 1996
- 1997 Silver Jubilee Symposium of Catalysis Society of India, 13th National Symposium on Catalysis, Dehradun, India, April 1997
- 1997 3rd Georg Maria Schwab Symposium on Catalysis, Dechema, (**Opening lecture**), Berlin, Germany, July 1997
- 1997 International Symposium on Dynamics of Surfaces and Reaction Kinetics in Heterogeneous Catalysis, Antwerpen, Belgium, September 1997
- 1998 Meeting of the Polish Catalysis Club, (**Opening lecture**), Cracow, Poland, February 1998
- 1998 40th Anniversary Conference of the Catalysis Society of Japan, (**Guest lecture**), Osaka, Japan, March 1998
- 1998 First International Conference on Inorganic Materials, Versailles, France, September 1998
- 1999 32nd International Meeting "ESR Spectroscopy; Recent Advances and Applications", York, United Kingdom, April 1999
- 1999 4th European Congress on Catalysis, EuropaCat-IV, (**Keynote lecture**), Rimini, Italy, September 1999
- 1999 2nd Asia-Pacific EPR Symposium, Hangzhou, China, November 1999
- 1999 1st French-Israeli Workshop on Catalysis, (**Opening lecture**), Paris, France, December 1999
- 2000 Catalysis in XXI Century: "From quantum chemistry to industry", Cracow, Poland, May 2000
- 2000 12th International Congress on Catalysis, 12 ICC, (**Keynote lecture**), Grenada, Spain, July 2000
- 2000 14th International Symposium on the Reactivity of Solids (**Keynote lecture**), Budapest, Hungary, August 2000
- 2000 2nd International Workshop "Oxide-based Systems at the Crossroads of Chemistry", Villa Olmo, Como, Italy, October 2000
- 2001 International Catalysis Workshop for Young Scientists (New Perspectives on Catalysis for Sustainable Chemical Technologies), Beijing, China, September 2001
- 2002 Workshop on Higher Education, Tianjin, China, December 2002
- 2003 International Conference on Physicochemical Approaches to Catalysis, Photocatalysis and Surface Photochemistry, Tokyo, Japan, March 2003
- 2003 Antonio Giuseppe Nasini Lecture, Division of Chemical Industry, XXI National Conference of the Italian Chemical Society - SCI 2003, Turin, Italy, June 2003
- 2004 François Gault Lecture, Chemische Gesellschaft Zürich, Zürich, Switzerland, April 2004
- 2004 François Gault Lecture, Nordic Symposium on Catalysis, (**Opening lecture**), Oulu, Finland, May 2004
- 2004 François Gault Lecture, The 2004 Younger European Chemists' Conference, (**Keynote lecture**), Turin, Italy, August 2004
- 2004 François Gault Lecture, Third International Taylor Conference, Queen's University, Belfast, UK, September 2004

- 2004 François Gault Lecture, Pannonian International Symposium on Catalysis, (**Opening lecture**), Srni, Czech Republik, September 2004
- 2004 François Gault Lecture, EFCATS School on Catalysis, (**Opening lecture**), Ustron, Poland , September 2004
- 2004 François Gault Lecture, Jumelage CNRS-PAN Meeting "Matériaux carbonés et catalytiques pour l'environnement", Zakopane, Poland , September 2004
- 2004 François Gault Lecture, 8th Hellenic Conference on Catalysis, (**Opening lecture**), Limassol, Cyprus, October 2004
- 2004 François Gault Lecture, Ludwig-Maximilian University, Institute of Physical Chemistry, München, Germany, November 2004
- 2004 François Gault Lecture, Institute of General and Inorganic Chemistry ,and Institute of Catalysis, Bulgarian Academy of Sciences, Sofia, December 2004
- 2004 François Gault Lecture, Institutes of General and Inorganic Chemistry and of Catalysis, Bulgarian Academy of Sciences, Sofia, Bulgaria, December 2004
- 2004 François Gault Lecture, French-Portugese Institute, Lisbon, Portugal, December 2004
- 2005 François Gault Lecture, Excellence PhD course "Innovative catalysts for applications in the fields of energy and environment", Turin, Italy, January 2005
- 2005 François Gault Lecture, 37th Polish Conference on Catalysis , (**Opening lecture**), Cracow, Poland, March 2005
- 2005 François Gault Lecture, Rideal Conference on Catalysis, (**Opening lecture**), Glasgow, UK, March 2005
- 2005 François Gault Lecture, Portugese Catalysis Society Meeting, (**Opening lecture**), Lisbon, Portugal, May 2005
- 2005 40th IUPAC meeting (**Keynote lecture**), Beijing, China, August 2005
- 2005 François Gault Lecture , APAC meeting, Krakow, Poland, September 2005
- 2005 François Gault Lecture, VI Baku International Mamedaliyev Petrochemistry Conference dedicated to Academician Yu.H. Mamedaliyev Centenary (**Opening lecture**), Baku, Azerbadjan, Septembre 2005
- 2005 François Gault Lecture, Marcel Prettre Lecture, Université de Lyon, France, December 2005
- 2005 François Gault Lecture, University Notre Dame de la Paix, Namur, Belgium, December 2005
- 2006 François Gault Lecture, Université de Caen, France, February 2006
- 2006 Workshop Sizemat "Size-dependent effects in materials for environmental protection and energy application" Varna, Bulgaria, May 2006
- 2008 EURYAS 2008, Interntional symposium on "Self-organization and selection in evolution of matter, molecules and life" Bucarest, Romania, April 2008
- 2008 XL years of ICSC PAS, XL Annual Polish Conference on Catalysis "Catalysis for Society", Krakow, Poland, May 2008
- 2008 NATO Advanced Research Workshop "From simplicity to complexity in Chemistry and beyond: interplay theory and experiment" Baku, Azerbaijan, May 2008
- 2009 International 3-Day Symposium "Catalysis, A major key to sustainability" Sydney, Australia, April 2009
- 2009 Centenary Lectureship, 42nd IUPAC Congress "Chemistry solutions", Glasgow, UK, August 2009
- 2010 Special Lecture, Honorary Professorship, Osaka Prefecture University

(Japan)

INVITED LECTURES in INTERNATIONAL/FOREIGN MEETINGS

- 1980 Autumn Meeting, Chemical Society, Cardiff,
United Kingdom, September 1980
- 1980 International Conference on Catalysis by Zeolites, Lyon,
France, September 1980
- 1980 1st French-US Seminar on Heterogeneous Catalysis, Paris-Lyon,
France, December 1980
- 1981 1st French-Mexican Seminar on Catalysis, Cocoyoc, Morelos,
Mexico, September 1981
- 1983 Summer School on Magnetic Resonance in Colloid and
Interface Science, Torun, Poland, June 1983
- 1983 2nd International Conference on Catalysis, The Taniguchi
Foundation, Osaka, Japan, October 1983
- 1985 International Workshop on Surface Properties of Oxides,
Torino, Italy, March 1985
- 1987 25th International Congress on Coordination Chemistry,
Nanjing, People's Republic of China, July 1987
- 1987 Workshop on Chemical Concepts for Ultrasmall Electronic
Devices, US Army Research Office,
Boston, United States, October 1987
- 1989 11th North American Meeting of the Catalysis Society,
Dearborn, United States, May 1989
- 1990 7th Roermond Conference on Catalysis, Rolduc,
Kerkrade, The Netherlands, June 1990
- 1990 II International Workshop on Heterogeneous Catalysis,
Ensenada, Baja California, Mexico, October 1990
- 1993 Gordon Research Conference on "Catalysis",
New London, United States, June-July 1993
- 1993 3rd French-Chinese Colloquium on Catalysis, Dalian, China, August 1993
- 1993 34th IUPAC Congress, Beijing, China, August 1993
- 1993 12th International Conference on Catalysis, The Taniguchi
Foundation, Osaka, Japan, November 1993
- 1994 International Symposium "Recent Progress in Catalytic
Chemistry", Sapporo, Japan, August 1994
- 1996 CRC International Symposium "Catalytic Science to create
Next Generation Chemistry", Sapporo, Japan, July 1996
- 1996 Fifth Eurasia Conference on Chemical Sciences, Guangzhou,
China, December 1996
- 1997 International Conference on Characterization and Processing of
Advanced Materials, Hong Kong, May 1997
- 1997 International Meeting on Precursory Research for Embryonic
Science and Technology, Kazusa Academia Center,
Tokyo, Japan, June 1997
- 1997 Asia-Pacific Congress on Catalysis (APCAT 97),
Kyung Ju, Korea, November 1997
- 1998 Post Conference Symposium of TOCAT 3 "Future Possibilities in

- 1998 Heterogeneous and Homogeneous Catalysis", Sapporo, Japan, July 1998
6th International Symposium "Surfaces and Interfaces", Exxon Chemical, European Science and Engineering Programme, Limelette, Belgium, October 1998
- 1999 4th International Forum of Environmental Catalysis, IFEC '99 Ochanomizu, Tokyo, Japan, January 1999
- 1999 Catalysis Day, Ludwig-Maximilians University, Munich, Germany, February 1999
- 1999 CRC International Symposium "Fabrication of Nano-ordered Materials and Catalytic Functions", Japan-France-Germany Trilateral Symposium on Catalysis (**Opening lecture**), Sapporo, Japan, December 1999
- 2000 Contemporary Inorganic Chemistry - II, Texas A&M University, College Station, Texas, United States, March 2000
- 2000 International Symposium "The significance of site isolation and phase cooperation in selective oxidation", Irsee, Germany, June 2000
- 2001 International Symposium on "Recent Results in Polyoxometalate Chemistry", Paris, France, October 2001
- 2001 CERC3 Brainstorming Conference "Chemistry in support of sustainability" Hanover, Allemagne, November 2001
- 2002 Special Conference in honour of Pr Sir J.M. Thomas "Perspectives and Prospects in Catalytic Science", Royal Institution, London, September 2002
- 2005 International Meeting "Chemistry and Society", Centre Scientifique, Polish Academy of Sciences, Paris, France, January 2005
- 2005 Meeting in honor of Pr G. Ertl, Institut Universitaire de France, Paris, France, March 2005
- 2007 Winter School "Modelling biological ion transport as well as surface water assemblies by metal-oxide based nanoobjects", Shanghai, China, March 2007
- 2007 Journées Division Chimie de Coordination de la SFC, Paris, January 2007
- 2008 "Catalysis and Sustainability", Yonsei University, Seoul, Korea, July 2008
- 2008 Meeting in honor of Pr M. Anpo's Academia Europaea election, Osaka Prefecture University, Osaka, July 2008
- 2009 International Scientific Cooperation Lecture, State Key Laboratory, DICP, Dalian, January 2009
- 2010 Centenary Lectureship, University College London, UK, May 2010
- 2010 Centenary Lectureship, Cardiff University, Wales, May 2010
- 2010 Centenary Lectureship, University of Manchester, UK, May 2010
- 2010 Centenary Lectureship, University of Loughborough, UK, May 2010
- 2010 Centenary Lectureship, University of Bristol, UK, May 2010

ORGANISATION OF SCIENTIFIC MEETINGS

(as member of the International Advisory Committee or Scientific Committee unless otherwise stated)

1979

- IInd International Symposium on Magnetic Resonance in Colloid and Interface Science, Menton, France

1983

- IIIrd International Symposium on Magnetic Resonance in Colloid and Interface Science, Torun, Poland

1986

- IVth International Symposium on Magnetic Resonance in Colloid and Interface Science, Munster, Germany

1989

- European Conference on Structure and Reactivity of Surfaces, Trieste, Italy
- Vth International Symposium on Magnetic Resonance in Colloid and Interface Science, Delaware, USA

1990

- International Workshop on Clusters and Surfaces, Turin, Italy
- 2nd France-China Symposium on Catalysis, IFP, Rueil-Malmaison, France

1991

- Journées de Chimie Physique 1991 : De l'agrégat à la surface modifiée, SFC, Paris, France
- 2d European Sabatier Conference on Catalysis, Mont Saint Nabor, France
- Japan-EC Joint Workshop on the Frontiers of Catalytic Science and Technology for Alternative Energy and Global Environment, JECAT, Tokyo, Japan

1992

- VIth International Symposium on Magnetic Resonance in Colloid and Interface Science, Florence, Italy
- 10th International Congress on Catalysis (French representative to the Council of the International Congress on Catalysis), Budapest, Hungary

1993

- 1st European Congress on Catalysis, Europa-Cat I, (Chairman of the Scientific Committee), Montpellier, France
- 11th Specialized Colloque AMPERE on Magnetic Resonance in Homogeneous and Heterogeneous Catalysis Menton, France

1994

- 2nd Tokyo Conference on Advanced Catalytic Science and Technology, Tocat 2, Tokyo, Japan
- Congrès SFC 94, Lyon, France

1995

- Japan-EC Joint Workshop on the Frontiers of Catalytic Science and Technology for Alternative Energy and Global Environment, JECAT, Villeurbanne, France
- 2nd European Congress on Catalysis, Europa-Cat II, (Chairman of the Scientific Committee), Maastricht, Netherlands
- VIIth International Symposium on Magnetic Resonance in Colloid and Interface Science, Madrid, Spain
- Catalysis Science and Technology, 1st Global Conference for Young Chinese Scientists, GCYCS, Tianjin, People's Republic of China
- 2nd International Forum on Environmental Catalysis, IFEC'95, Tokyo, Japan

1996

- 11th International Congress on Catalysis, (Vice-President of the Council of the International Congress on Catalysis), Baltimore, USA

1997

- 3rd International Forum on Environmental Catalysis, IFEC'97, Tokyo, Japan
- 3rd European Congress on Catalysis, Europa-Cat III, 1997, Krakow, Poland
- Japan-EC Joint Workshop on the Frontiers of Catalytic Science and Technology for Alternative Energy and Global Environment, JECAT, (Moderator of the Round Table on superacids), Villeurbanne, France
- Journée 1997 "Frontiers in Inorganic Chemistry" (Organiser), Paris, France

1998

- VIIIth International Symposium on Magnetic Resonance in Colloid and Interface Science, Namur, Belgium
- Journée 1998 "Frontiers in Inorganic Chemistry" (Organiser), Paris, France
- 3rd Tokyo Conference on Advanced Catalytic Science and Technology, Tocacat 3, Tokyo, Japan

1999

- Journée "Transfert d'électron", Paris, France
- Journée "Structures Electroniques des Matériaux Complexes", Hommage à Christiane Senemaud, Paris, France
- 4th International Forum on Environmental Catalysis, IFEC'99, Tokyo, Japan
- Journée 1999 "Frontiers in Inorganic Chemistry" (Organiser), Paris, France
- 4th European Congress on Catalysis, Europa-Cat IV, 1999, Rimini, Italy
- Asia-Pacific EPR/ESR Symposium, APES'99, (Co-chairman of the International Organizing Committee), Hang Zhou, People's Republic of China

2000

- 2nd Asia-Pacific Congress on Catalysis, APCAT II-2000, Sydney, Australia
- 14th International Symposium on the Reactivity of Solids, Budapest, Hungary
- 12th International Congress on Catalysis, (President-Elect of the International Association of Catalysis Societies), Grenada, Spain
- 9th International Symposium on Heterogeneous Catalysis, Varna, Bulgaria

2001

- 4th World Congress on Oxidation Catalysis (Co-chairman of the Technical Program Committee), Berlin, Germany
- 4th International Symposium on Surface Heterogeneity in Adsorption and Catalysis, ISSHAC-4, Krakow, Poland

2002

- Journées Gecom-Concord, Paris, France
- 4th Tokyo Conference on Advanced Catalytic Science and Technology, Tocacat 4, Tokyo, Japan

2003

- 3rd Indo-Pacific Catalysis Conference, IPCAT-3, Taipei, Taiwan
- 21st Taiwan symposium on Catalysis and Reaction Engineering (TSCRE-2003),

- Taipei, Taiwan
- EuropaCat-VI, Innsbrück, Germany

2004

- 10th International Symposium on Magnetic Resonance in Colloid & Interface Science , Hangzhou, China.
- 13th International Congress on Catalysis (President of the International Association of Catalysis Societies, IACS) Paris, France

2005

- International Meeting "Chemistry and Society", Centre Scientifique, Polish Academy of Sciences, Paris, France
- Journée 2005 "Frontiers in Inorganic Chemistry" (Organiser), Paris, France
- 7th European Congress on Catalysis, Europa-Cat VII, Sofia, Bulgaria
- International conference "Research Advances in Rational Design of Catalysts and Sorbents" IFP-Lyon, France

2006

- 5th Tokyo Conference on Advanced Catalysis Science and Technology, Tocat 5, Tokyo, Japan
- 4th Asia Pacific Congress on Catalysis (APCAT), Singapore

2007

- 1st ERA-Chemistry Flash Conference "Molecules at the Interface: from single molecule to functional assemblies", Autrans , France (Chairman)
- III International Conference "Catalysis: fundamentals and application", Novosibirsk, Russia
- International Conference "Chemistry and Society", Krakow, Poland (Cochairman)

2008

- 14th International Congress on Catalysis, Seoul, Korea

2010

- 6th Tokyo Conference on Advanced Catalysis Science and Technology, Tocat 6, & Fifth Asia Pacific Congress on Catalysis , APCAT5
- APAC 2010, 2nd International Symposium on Air Pollution and Abatement Catalysis, Cracow, Poland

2011

- 23rd Annual Conference of Academia Europaea, UNESCO Headquarters, Paris, (Cochairman)