

## *Robert SCHLÖGL*

### **A. Professional Preparation**

Chemistry 1973-1978, Germany  
Diploma Thesis, 1979  
PhD. Chemistry, 1982 Ludwig Maximilians Universität in Munich, "Marginalien in Schwarz, Beiträge zur Interkalationschemie in Graphit"  
Post-Doctorate, 1982-83 Sir. J. M. THOMAS, Dept. of Physical Chemistry, Cambridge, U.K.  
1984-85 Prof. H. J. GÜNTHERODT, Institut für Physik, Basle, Switzerland  
Habilitation, 1986-89 Prof. G. ERTL, Fritz-Haber-Institut der Max-Planck-Gesellschaft, Berlin  
1989 Qualification as a University Lecturer, Habilitation Title: Understanding the Structure of the Industrial Ammonia-Synthesis Catalysts

### **Honors and Awards:**

Schunck Award for Innovative Materials, 1989  
Otto Bayer Prize, 1994  
Vice-Chairman of Chemisch-Physikalisch-Technische Sektion des Wissenschaftlichen Rates der Max-Planck-Gesellschaft, 2002-2003  
Chairman of Chemisch-Physikalisch-Technische Sektion des Wissenschaftlichen Rates der Max-Planck-Gesellschaft, 2004-2006

### **B. Appointments**

#### **Academic:**

1994 to present - Director at the Fritz-Haber-Institut der Max-Planck-Gesellschaft, Berlin  
1998 to present - Honorary Professorship at Humboldt-Universität zu Berlin  
1995 to present - Member of the Berlin-Brandenburgischen Akademie der Wissenschaften  
1994 to present - Honorary Professorship at the Technische Universität (TU) Berlin, Department of Chemistry  
1989 -1994, Full Professor of Inorganic Chemistry, J.W. Goethe-Universität, Frankfurt

#### **Industrial:**

1986 Hoffmann La Roche, Basle, Switzerland

### **Sabbaticals and Fellowships**

2001 Guest Professorship: L.M.S.P.C., Laboratoire des Matériaux, Surfaces et Procédés pour la Catalyse, UMR 7515 du C.N.R.S. / ULP, Université Louis Pasteur  
2004 Tetelman Fellow, Yale University, USA  
2005 Fellow of the Royal Society of Chemistry, Cambridge, UK

### **C. Publications Presentations and Patents:**

More than 500 publications, more than 200 presentations and invited talks, such as

- 8th Pannonian International Symposium on Catalysis, July 4-7, Szeged, Hungary: Plenary lecture: "Solid state dynamics of heterogeneous catalysts"
- TOCAT 5, July 23-28, 06), Tokyo, Japan: invited lecture and chair "Copper in hydrogen catalysis"
- NAM /North American Catalysis Society 20<sup>th</sup> Conference), Houston, Texas, USA, June 15-18, 2007, Bringing together in-situ spectroscopy and electron microscopy to study the function of complex oxide catalysts

**Patents:** registered inventor for 18 families of patents and/or patent applications

### **Publications (10 recent)**

*Blume, R., M. Hävecker, S. Zafeirotos, D. Teschner, E. Vass, P. Schnörch, A. Knop-Gericke, R. Schlögl, S. Lizzit, P. Dudin, A. Barinov and M. Kiskinova:* Monitoring in-situ catalytically active states of Ru catalysts for different methanol oxidation pathways.

*Physical Chemistry Chemical Physics* **9**, 3648-3657 (2007).

*Breitkopf, C., H. Papp, X. Li, R. Olindo, J. A. Lercher, R. Lloyd, S. Wrabetz, F. C. Jentoft, K. Meinel, S. Förster, K.-M. Schindler, H. Neddermeyer, W. Widdra, A. Hofmann and J. Sauer:* Activation and Isomerization of *n*-Butane on Sulfated Zirconia Model Systems - An Integrated Study across the Materials and Pressure Gaps.

*Physical Chemistry Chemical Physics* **9**, 3600-3618 (2007).

*Bron, M., D. Teschner, A. Knop-Gericke, F. C. Jentoft, J. Kröhnert, J. Hohmeyer, C. Volckmar, B. Steinhauer, R. Schlögl and P. Claus: Silver as Acrolein Hydrogenation Catalyst: Intricate Effects of Catalyst Nature and Reactant Partial Pressures. Physical Chemistry Chemical Physics 9, 3559-3569 (2007).*

*Chen, X., D. S. Su, S. B. Abd Hamid and R. Schlögl: The morphology, porosity and productivity control of carbon nanofibers or nanotubes on modified activated carbon. Carbon 45 (4), 895-898 (2007).*

*Frank, B., F. C. Jentoft, H. Soerijanto, J. Kröhnert, R. Schlögl and R. Schomäcker: Steam reforming of methanol over copper-containing catalysts: influence of support material on microkinetics. Journal of Catalysis 246, 177-192 (2007).*

*Kovnir, K., M. Armbrüster, D. Teschner, T. Venkov, F. C. Jentoft, A. Knop-Gericke, Yu. Grin and R. Schlögl: A New Approach to Well-Defined, Stable and Site-Isolated Catalysts. Science and Technology of Advanced Materials, in press (2007).*

*Paál, Z., N. Györfy, A. Wootsch, L. Tóth, I. Bakos, S. Szabó, U. Wild and R. Schlögl: Preparation, physical characterization and catalytic properties of unsupported Pt-Rh catalyst. Journal of Catalysis 250, 254-263 (2007).*

*Schlögl, R.: Ammonia Synthesis. In: Handbook of Heterogeneous Catalysis: 2<sup>nd</sup> Edition in 8 Volumes. Ed. by G. Ertl, H. Knözinger, F. Schüth, J. Weitkamp. Wiley-VCH Verlag, in press (2007).*

*Schlögl, R.: Carbons. In: Handbook of Heterogeneous Catalysis: 2<sup>nd</sup> Edition in 8 Volumes. Ed. by Ertl, G., H. Knözinger, F. Schüth, J. Weitkamp. Wiley-VCH Verlag, in press (2007).*

*Schlögl, R.: Fused Catalysts. In: Handbook of Heterogeneous Catalysis: 2<sup>nd</sup> Edition in 8 Volumes. Ed. by G. Ertl, H. Knözinger, F. Schüth, J. Weitkamp. Wiley-VCH Verlag, in press (2007).*

## **D. Synergistic Activities**

### **i. political**

- \* President of the German Catalysis Society for 6 years.
- \* Initiation of National Industry-Academia Coordinated Research Initiative operating since 2000
- \* Co-initiator of a National Priority Funding Program on model catalysis (DFG-SPP) with 15 teams nationwide
- \* Co-initiator of a German Research Center of Excellence (DFG-SFB) on metal oxide model catalysis
- \* Chair of panel 4 (Chemistry and Material Sciences) of the European Research Council (ERC)

### **ii. scientific**

- \* **Core Participant in European Network IDECAT “Catalysis for Sustainable Energy Production”**
- \* **Max Planck Project ENERCHEM (Energy from renewable resources - an interdisciplinary approach by Chemists and Material Scientists to tackle questions of social relevance)**
- \* Creation of the virtual European Laboratory of Surface Science and Catalysis ELCASS (under participation of France and Italy)
- \* Participation in various EU projects, i.e. CANAPE, ELCAT,
- \* Contract based cooperation with COMBICAT, Malaysia, Boreskov Institute, Novosibirsk, University of Zagreb, University of California, Berkeley,
- \* Numerous bilateral and multi-lateral Academia-Industry cooperations: among others with industrial partners such as BASF, Bayer, UPO, DOW Chemical, Degussa, Süd-Chemie AG
- \* Max Planck Partner Group with State Key Laboratory on Catalysis in Dalian, China
- \* Participation in International Partnership for Research and Education. **PIRE: Molecular Engineering for Conversion of Biomass-derived Reactants for Fuels, Chemicals and Materials**

### **iii. teaching**

- \* Participation in International Max Planck Research School and initiation of the Berlin inter-university-graduate teaching lecture series on modern aspects in Catalysis (Ringvorlesung Catalysis)

## **Professional Society Memberships**

### *Commissions and Boards:*

- Berlin-Brandenburgische Akademie der Wissenschaften (BBAW), Award Commission, Chair 2000-2003
- Berlin-Brandenburgische Akademie der Wissenschaften (BBAW), Board Member
- Member of the Convent for Technical Sciences of the Union of German Academies of Sciences (akatech)
- BESSY Beamtime Committee, Berlin (Berliner Elektronenspeicherring-Gesellschaft für Synchrotronstrahlung m.b.H.)
- BESSY Scientific Advisory Board
- Dechema e. V. Fachsektion Katalyse, Chair 1996-2002
- EFCATS – European Federation of Catalysis Societies - Board (Europäischer Katalytiker-Verband)
- Deutsches Museum München (German Museum Munich) Scientific Advisory Board (until 2006)
- Fachinformationszentrum (FIZ) Karlsruhe, Board (until 2006)
- Hahn-Meitner-Institut (HMI), Berlin, Scientific Advisory Board (1995-2001)
- IACS - International Association of Catalysis Societies
- Institut für Angewandte Chemie Berlin-Adlershof e.V. (ACA), Berlin. Kuratorium (until 2005)
- Max-Planck-Gesellschaft, Perspektivenkommission (until 2007)
- Max-Planck-Gesellschaft, Advisory Board for Scientific Information, Chair (until 2005)
- GDCh (Society of German Chemists), Literatur-Kommission
- PCCP (Physical Chemistry – Chemical Physics) Advisory Board
- Gmelin Database, Advisory Board (since 2007)
- Advisory Board Archiv zur Geschichte der Max-Planck-Gesellschaft (2008-2012)

### *Editorial Boards:*

Since 2003	Catalysis Letters
Since 2003	Journal of Catalysis
1999- 2003	PCCP (Physical Chemistry – Chemical Physics) – until 2003
1998- 2002	Applied Catalysis A

### *Memberships*

- AAAS (American Association for the Advancement of Science)
- ACS (American Chemical Society)
- AKK der DKG (Arbeitskreis Kohlenstoff der deutschen Keramischen Gesellschaft)
- American Carbon Society
- DECHEMA (Gesellschaft für chemische Technik und Biotechnologie m.b.H.)
- Deutsche Bunsengesellschaft
- DGE (Deutsche Gesellschaft für Elektronenmikroskopie)
- DGMK (Deutsche Gesellschaft für Erdöl, Erdgas und Kohle e. V.)
- DPG e. V. (Deutsche Physikalische Gesellschaft e. V.)
- Freunde der Hebräischen Universität Jerusalem in Berlin e. V.
- GDCh (Gesellschaft deutscher Chemiker)
- ICHEME Working Party on Chemical Reaction Engineering in the European Federation of Chemical Engineering
- The Electrochemical Society

## **E. Collaborators and Other Affiliations**

### **i. Collaborators (selection in alphabetical order)**

Markus Antonietti, Eduard Arzt, Simon Bare, Xinhe Bao, Valerii Bukhtiarov, Jürgen Behm, Gabriele Centi, Abhaya Datye, Richard W. Fischer, Hajo Freund, Konrad Hayek, Klaus Huthmacher, Marc Ledoux, Martin Muhler, Klaus Müllen, John Robertson, Miquel Salmeron, Matthias Scheffler, Sharifah Bee Abd Hamid, Ferdi Schüth

### **ii Thesis Advisor and Post-doctoral Scholar Sponsor**

Since 1994 at FHI: 10 habilitations , 75 PhD within the department, 11 M.S