

## CV – Prof. Dr. Karl-Heinz Ernst

Prof. Dr. Karl-Heinz Ernst  
In der Pünt 12  
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<http://www.empa.ch/mss>

### Professional Experience:

- Since 1992 Senior Scientist at Empa, Swiss Federal Laboratories for Materials Science and Technology, Dübendorf, Switzerland, since 1998 head of *Surface Technology Group*, (now *Molecular Surface Science Group*)
- 7-12/2018 Visiting scientist at the Czech Academy of Sciences, Prague, Institute of Physics, Group of Dr. Pavel Jelinek
- 6/2018 Lawrence Berkeley Lab Affiliate
- 2012 Visiting scientist at IBM Almaden, San Jose, California, USA, w/ Dr. Andreas Heinrich
- Since 2010 Professor, Department of Chemistry, University of Zurich
- 2017 Visiting Professor Université Angers, France
- 7/2009 Visiting Scientist Chinese Academy of Sciences, Institute of Physics, Prof. H.-J. Gao
- 9/2003-8/2004 On sabbatical leave to University of Washington, Seattle, USA, Department of Bioengineering, Group of Prof. Viola Vogel
- 8/1999-5/2000 On sabbatical leave to UC Berkeley, Department of Physics and Lawrence Berkeley National Laboratory, California, USA, Group of Prof. Y.-R. Shen
- 1992 Visiting scientist at the Freie Universität Berlin, Sonderforschungsbereich (SFB 6) of the German National Science Foundation (DFG)
- 1990 - 1991 Post-Doctorate at the University of Washington, Seattle, USA, Department of Chemistry, Group of Prof. Charles Campbell

### Education:

- 2007 Habilitation at University Zurich, Degree: **Private Dozent (PD)**
- 1986 - 1990 Graduate Study at the Inst. f. Physical Chemistry, Freie Universität Berlin and at the Berlin Electron Storage Ring for Synchrotron Radiation (BESSY), Supervisor: Prof. Dr. Klaus Christmann, Thesis reviewers: Prof. Dr. Klaus Christmann, Prof. Dr. Gerhard Ertl, Degree: **Dr. rer. nat.** (magna cum laude)
- 1982 - 1986 Chemistry, Freie Universität Berlin (FUB), Degree: **Diplom-Chemiker**
- 1979 - 1982 Chemical Engineering at the University of Applied Sciences (Technische Fachhochschule, TFH) Berlin, Degree: **Chemie-Ingenieur (grad.)**
- 1978 - 1979 Compulsory military service, Gießen & Hann. Münden, D
- 1977 - 1978 College specialising in technical subjects, (Technische Fachoberschule), Braunschweig, Degree: **Fachhochschulreife**
- 1975 - 1977 Professional training, School of Chemistry Dr. Heinemann, Braunschweig, Degree: **Chemisch-Technischer Assistent (CTA)**
- 1966 - 1975 Primary and Secondary Schools

### Awards:

- 2016 Functionalized Nano-Materials Award for outstanding achievements in nano materials science, ICON<sup>2</sup>, Changchun, China
- 2014 Promoted to *Empa Distinguished Senior Researcher*
- 2003 Empa Research Prize
- 1992 Habilitation Fellowship of the German National Science Foundation (Deutsche Forschungsgemeinschaft, DFG)
- 1990 Postdoctoral Fellowship of the German National Science Foundation (Deutsche Forschungsgemeinschaft, DFG)

**Publications:** 155, peer reviewed 117, h-citation index: 37 (> 4800 citations)

**Presentations:** 288 oral presentations, of which 249 were invited

### Professional memberships and honorary functions

- a) Lecturer at the Department of Chemistry, University Zurich (since 2007)
- b) Lecturer at the Materials Science Department, Federal Institute of Technology (ETH) Zurich (since 2005)
- c) Lecturer at the Chemistry Department, Federal Institute of Technology (ETH) Zurich (2005-2014)
- d) Lecturer in Physical Chemistry, University of Applied Sciences (TFH) Berlin (1988–1990).
- e) President of the Swiss Working Group for Surface and Interface Science (SAOG) and chairman of the annual SAOG Meeting
- f) Member of the editorial board of the Swiss Chemical Society Journal *CHIMIA* (2012-2016)
- g) Member of the editorial board of the Elsevier journal *Surface Science* (2012 – 2014)
- h) Member of the International Editorial Advisory Board of the Wiley journal *Helvetica Chimica Acta* (2016–)
- i) Member of the local Scientific Advisory Board, European Conference of Applied Surface and Interface Analysis - ECASIA 2003, Berlin
- j) Local organizer of the COST CM0601 ECCL – WG3 Meeting, 07. 03. 2009, Zürich
- k) Member of the Scientific Program Committee ECOSS 2014, Antalya, TR
- l) Organizer of *Chirality at the Nanoscale* Conference, 13. – 17. 10. 2019, Ascona, CH
- m) Organizer of Symposium of Atomic and Surface Physics (SASP), 02. 02. 2020, St. Moritz, CH
- n) Organizer of the Symposium 'Chirality at Surfaces', ECOSS 2014, Antalya, TR
- o) Member of the Deutsche Bunsengesellschaft (DBG) for Physical Chemistry (since 1987)
- p) Member of the Deutsche Physikalische Gesellschaft (DPG, since 1986)
- q) Member of the Swiss Chemical Society (SCG, since 2010)
- r) Member of the Swiss SSSTC Delegation to Chinese Academy of Science, Beijing, Sept. 2010
- s) Reviewer for international scientific journals like *Angewandte Chemie*, *Nature*, *Nature Chemistry*, *Nature Nanotechnology*, *Nano Letters*, *ChemPhysChem*, *Advanced Functional Materials*, *Advanced Materials Interfaces*, *Journal of the American Chemical Society*, *ACS Nano*, *ACS Omega*, *Surface Science*, *Journal of Chemical Physics*, *Journal of Physical Chemistry*, *Surface and Interface Analysis*, *Langmuir*, *Zeitschrift f. Physikal. Chemie*, *Chemistry–A European Journal*
- t) Referee and examiner for diploma and PhD theses at EPF Lausanne and University Zurich
- u) Organizer of two symposia at National Meetings of the American Chemical Society (ACS) 2008
- v) Member of the Organizing Committee of the International Conference on Atomic Level Characterization (ALC) 2009: Maui, Hawaii; 2011: Seoul, Korea; 2013: Kona, Hawaii, 2015: Matsue, Japan, 2017: Kauai, Hawaii
- w) Member of the International Advisory Committee of the International Conference on Atomic Level Characterization (ALC) 2019: Kyoto, Japan
- x) Co-organizer of the 22<sup>nd</sup> and 30<sup>th</sup> Symposium of Surface Science (3S) in St. Moritz 2009 & 2117
- y) Co-organizer of the PIRE ECCI Workshop on heterogeneous catalysis, Dalian, China 2009
- z) Panel Member for the European Research Council (ERC), consolidator grants, 2013 – 2017
- aa) Panel Member for beam time allocation at BESSY II, Berlin, 2013 – 2016
- bb) Reviewing expert for the European Research Council (ERC), startup, consolidator and advanced grants
- cc) Reviewing expert for the Swiss-Korean Science & Technology program
- dd) Reviewing expert for NWO, the Nederlandse Organisatie voor Wetenschappelijk Onderzoek (NWO)
- ee) External expert for appointments of professorships at various European universities
- ff) Reviewer of PhD theses and official opponent at PhD defenses at Aarhus and Aalborg University, DK; University Groningen, NL; University Leuven, B
- gg) Guest editor for *Journal of Physics: Condensed Matter* Karl-Heinz Rieder Festschrift
- hh) Guest editor for the Swiss Chemical Society Journal *CHIMIA*
- ii) Guest editor for the *Journal of Chemical Physics (IOP)*
- jj) Member of the prize committee Gerhard Ertl Young Investor Award of the German Physical Society (DPG) 2014 (endowed by Elsevier)