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Physical Chemistry I

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born December 18, 1951, in Hagen, married, 1 daughter

### Curriculum vitae

- 1970 Abitur (matriculation standard) in Hagen  
1970–1975 Education in chemistry (Diploma) at Ruhr-Universität Bochum  
1975 Diploma thesis in the group of Prof. Dr. Friedrich Stuhl, Ruhr-Universität Bochum: *Detection of radicals by resonance fluorescence, development of suitable light sources* (in German)  
1976–1978 Doctorate in the group of Prof. Dr. Friedrich Stuhl, Ruhr-Universität Bochum: *Vacuum-UV-photolysis with a hydrogen laser: Production of  $O(^3P)$  and  $O_2(b^1\Sigma_g^+)$  and investigation of the temperature dependence of their behavior on the presence of different gases* (in German)  
1976–1979 Research Assistant at Ruhr-Universität Bochum in the group of Prof. Dr. Heinrich Richterling  
1979–1994 Permanent Scientific Staff member at the German Aerospace Center DLR, Stuttgart, in the group of Prof. Dr. Thomas Just; Group Leader since 1988  
1987–1988 Sabbatical with the Department of Mechanical Engineering at Stanford University (with Profs. Craig T. Bowman und Ronald K. Hanson) and with the Molecular Physics Laboratory of SRI International, USA (with Dr. David R. Crosley)  
1992 Habilitation in the group of Prof. Dr. Jürgen Warnatz, University of Stuttgart *Laser-optical methods for the quantitative detection of minor species concentrations and temperature in combustion* (in German)  
1993–1994 Heisenberg Fellowship (on leave from DLR); research stays at ONERA, Paris  
since 1994 Full professor (C4) for Physical Chemistry at Bielefeld University  
2005 Offer of the Wu Chair for Mechanical and Aerospace Engineering, Princeton University, USA (declined)

### Fellowships, awards, and selected lectures

- 1993–1994 Heisenberg Fellowship granted by the DFG (Deutsche Forschungsgemeinschaft)  
1993 Annual "Baetjer Lectures" of the School of Mechanical Engineering and Applied Science of Princeton University, USA.  
2000 Award of the Public Understanding of Sciences and Humanities Program of the Stifterverband für die Deutsche Wissenschaft for the chemical education project **teutolab**  
2002 Award of the Public Understanding of Sciences and Humanities Program of the Stifterverband für die Deutsche Wissenschaft for the chemical education project **teutolab-NETZWERK**  
2004 50<sup>th</sup> Anniversary Lecture, International Combustion Institute, Chicago, USA  
2006 Steinhof Lecture, Kaiserslautern

2006	Alarich-Weiß Lecture, Darmstadt
2007	Cross of the Order of Merit of the Federal Republic of Germany awarded by Federal President Horst Köhler
2008	Award of an Honorary Guest Professorship, University of Science and Technology of China, Hefei
2009	Keynote Lecture, 30 <sup>th</sup> Annual Combustion Research Meeting of the DOE, Airlie, USA
2011	"Distinguished Woman in Chemistry/Chemical Engineering", 2011 year of chemistry celebration, awarded by International Union of Pure and Applied Chemistry
2011	Inauguration Lecture, Saudi Arabian Section of the Combustion Institute, KAUST, Saudi Arabia
2011	43 <sup>th</sup> KOSCO Lecture of the Korean Section of the Combustion Institute, Gyeongju, Korea
2011	CECOST Lecture, Lund, Sweden
2012	Wilhelm Jost Lecture of the Göttingen Academy of Sciences and Humanities and the Deutsche Bunsen-Gesellschaft für Physikalische Chemie, Berlin, Leipzig, Darmstadt, Marburg, Göttingen
Nov.-Dec. 2012	Guest Professor at the University of Science and Technology of China (USTC), Hefei, China
2012-2017	Advisory Professor, Shanghai Jiao Tong University, China
Jan. 2013	Guest Professor at the King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi-Arabia
2013	Clara Immerwahr Lecture, Berlin
Feb.-March 2013	Guest Professor at the Technical University of Denmark (DTU), Lyngby, Denmark
Sept. 2013	Guest Professor at the University of Science and Technology of China (USTC), Hefei, China
Nov. 2015	Giulio Natta Medal in Chemical Engineering and Lectio Magistralis, awarded by the university Politecnico di Milano, Italy
Jan. 2016	Award for International Scientific Cooperation of the Chinese Academy of Sciences
2016	National Friendship Award of the People's Republic of China
Jan. 2017	International Science and Technology Cooperation Award 2016 of the People's Republic of China
2017	Honorary Senator of Bielefeld University
2018	Fellow of The Combustion Institute
2018	President's Appreciation Award, The Combustion Institute
2018	Alfred C. Egerton Gold Medal of The Combustion Institute
2018	Honorary Professorship, Nanjing University of Science and Technology, China
2018	Crocco Lecture, Department of Mechanical and Aerospace Engineering, Princeton University, USA
2019-2014	Honorary Guest Professorship at the Institute of Engineering Thermophysics of the Chinese Academy of Sciences, Beijing, China

### **Activities in scientific organizations/committees**

since 2017	Fellow of the European Academy of Sciences
since 2017	Member of the North Rhine-Westphalian Academy of Sciences, Humanities and the Arts
since 2016	Member of the Scientific Advisory Committee of the BMBF Kopernikus Project Power-to-X of the DECHEMA, RWTH Aachen University and FZ Jülich
03/2016– 02/2020	Member of the University Council of Technische Universität Darmstadt

since 2016 Member of the Göttingen Academy of Sciences and Humanities  
 2015–2021 Member of the Scientific Advisory Committee of the Cambridge Centre for Carbon Reduction in Chemical Technologies, University of Cambridge, UK  
 since 10/2015 Member of the National Academy of Science and Engineering acatech  
 2014–2017 Member of the Scientific Advisory Board of the Clean Combustion Research Center, KAUST, Saudi Arabia  
 2013–2016 Member of the Advisory Committee of the Combustion Research Facility, Sandia National Laboratories, USA  
 2012–2016 President of The Combustion Institute  
 02/2012–01/2018 Member of the German Council of Science and Humanities  
 2012–2019 Member of the Scientific Advisory Board of the Wilhelm and Else Heraeus Foundation  
 2010–2015 Deputy Speaker of the SFB 686 *Model-based control of homogenized low-temperature combustion*  
 2010–2014 Member of the Board for the Otto Hahn Award of the city of Frankfurt, GDCh and DPG  
 since 2010 Member of the International Advisory Board of the Center for Combustion Energy, Beijing, China  
 2009–2012 Deputy Chair of the Selection Committee of the Alexander von Humboldt Foundation  
 2009–2014 Member of the International Advisory Committee of the Combustion Energy Frontier Research Center, Princeton, USA  
 2009–2010 Vice President of the Deutsche Bunsen-Gesellschaft für Physikalische Chemie  
 since 05/2008 Member of the National Academy of Sciences Leopoldina  
 2008–2013 Member of the Senate of the Hermann von Helmholtz Association of German Research Centres  
 2008–2012 Vice President / President Elect of The Combustion Institute  
 2008–2010 Member of the Board for the van t'Hoff Award of the Deutsche Bunsen-Gesellschaft für Physikalische Chemie  
 2007–2013 Member of the Board of the German Section of the International Combustion Institute  
 2007–2014 Member of the Selection Committee of the GDCh for the Otto Hahn Award  
 07/2007–06/2013 Member of the Senate and Joint Committee of the Deutsche Forschungsgemeinschaft  
 2007–2013 Member of the International Advisory Board of the Alexander von Humboldt Foundation  
 2007–2008 President of the Deutsche Bunsen-Gesellschaft für Physikalische Chemie  
 since 2006 Fellow of the International Union of Pure and Applied Chemistry (IUPAC)  
 2006–2008 Member of the National Evaluation Committee "Chemistry" of the German Science Council  
 2005–2013 Member of the Selection Committee for the August Wilhelm von Hofmann Lecture of the GDCh  
 2004–2012 Member of the Selection Committee of the Alexander von Humboldt Foundation  
 2004–2010 Editor-in-Chief for "Combustion and Flame"  
 2004–07/2007 Member of the Review Board of the Deutsche Forschungsgemeinschaft  
 2004 Colloquium Co-Chair "*Laser Diagnostics and Sensors*" of the 30th International Combustion Symposium, Chicago, USA  
 2003–2013 Member of the Editorial Board of "Zeitschrift für Physikalische Chemie"  
 2003–2007 Liaison Professor for the "Fonds der Chemischen Industrie"  
 2003–2006 Member of the Steering Committee of the Deutsche Bunsen-Gesellschaft für Physikalische Chemie  
 since 2002 Member of the Physical and Biophysical Chemistry Division Advisory Committee of the International Union of Pure and Applied Chemistry

- 2002–2021 Member of the Editorial Board of "Progress in Energy and Combustion Science"
- 2002–2016 Member of the Board of Directors of The Combustion Institute
- 2002–2012 Member of the Board of Trustees of the Volkswagen Foundation
- 2002–2005 Member of the Advisory Committee of the Forschungszentrum Jülich GmbH
- 2002 Colloquium Co-Chair "*Laser Diagnostics*" of the 29th International Combustion Symposium, Sapporo, Japan
- 2001–2006 Member of the Editorial Board of "Combustion and Flame"
- 2000 Colloquium Co-Chair "*Reaction Kinetics*" of the 28th International Combustion Symposium, Edinburgh, UK
- 1999 Chair of the Gordon Research Conference on Laser Diagnostics in Combustion, Lucca, Italy
- 1997 Vice Chair of the Gordon Research Conference on Laser Diagnostics in Combustion, Plymouth, USA
- 1996–2001 Member of the Nomination Committee for the Bennisen Foerder Award (Ministry of Science)
- 1995–2002 Member of the Jury for Lise Meitner postdoctoral stipends (Ministry of Science)

### **University functions**

- 1996–2000 Head of Graduate Studies Committee
- 1996–2008 Elected member of the Faculty Advisory Board
- 1999–2000 Deputy Department Chair
- 2000–2001 Department Chair
- 2001–2003 Vice Rector for Research
- 2008–2013 Member of the University Council of Bielefeld University