

Curriculum vitae

Prof. Dr. Katharina Kohse-Höinghaus

Physical Chemistry I
Department of Chemistry
Bielefeld University
Universitätsstraße 25
D-33615 Bielefeld, Germany
Email: kkh@uni-bielefeld.de

Born 18/12/1951 in Hagen, married, 1 daughter



Education

- 1970 Abitur / Secondary School Diploma in Hagen
- 1970–1975 Chemistry studies at Ruhr-Universität Bochum
- 1975 Diploma thesis in Physical Chemistry (Supervisor Prof. Dr. Friedrich Stuhl): *Detection of radicals by resonance fluorescence, development of suitable light sources* (in German)
- 1976–1978 Doctorate at Ruhr-Universität Bochum in Physical Chemistry (Supervisor Prof. Dr. Friedrich Stuhl), Thesis: *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)
- 1992 Habilitation, Stuttgart University in Energy Technology (Mentor: Prof. Dr. Jürgen Warnatz), Thesis: *Laser-optical methods for the quantitative detection of minor species concentrations and temperature in combustion* (in German)

Professional history

- 1976–1979 Research Assistant, Ruhr-Universität Bochum, with Prof. Dr. Heinrich Richtering
- 1979–1987 Permanent Scientific Staff, German Aerospace Center DFVLR/DLR, Stuttgart, with Prof. Dr. Thomas Just
- 1987–1988 Sabbatical, Department of Mechanical Engineering, Stanford University (with Profs. Craig T. Bowman and Ronald K. Hanson), and Molecular Physics Laboratory, SRI International, USA (with Dr. David R. Crosley),
- 1988–1994 Group Leader, Permanent Staff, German Aerospace Center DFVLR/DLR, Stuttgart
- 1993–1994 Heisenberg Fellowship by Deutsche Forschungsgemeinschaft (on leave from DLR); research stays at ONERA, Paris
- 1994–2005 Full professor (C4) for Physical Chemistry, Bielefeld University
- 2005 Offer of the Wu Chair for Mechanical and Aerospace Engineering, Princeton University, USA (declined)
- 2005–2017 Full professor (W3) for Physical Chemistry, Bielefeld University
- Since 2017 Senior Professor of Physical Chemistry, Bielefeld University

Awards and honors

- 1993 Baetjer Lecture, School of Mechanical Engineering and Applied Science, Princeton University, USA.
- 2000, 2002 Awards of the Public Understanding of Sciences and Humanities Program, Stifterverband für die Deutsche Wissenschaft

2004 50th Anniversary Lecture, International Combustion Institute, Chicago, USA

2006 Steinhof Lecture, Kaiserslautern

2006 Fellow, International Union of Pure and Applied Chemistry (IUPAC)

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 Honorary Guest Professor, University of Science and Technology of China (USTC), Hefei, China

2009 Keynote Lecture, 30th Annual Combustion Research Meeting of the DOE, Airlie, USA

2011 Distinguished Woman in Chemistry/Chemical Engineering Award, International Union of Pure and Applied Chemistry

2011 Inauguration Lecture, Saudi Arabian Section of the Combustion Institute, KAUST, Saudi Arabia

2011 43th KOSCO Lecture, Korean Section of the Combustion Institute, Gyeongju, Korea

2011 CECOST Lecture, Lund University, 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

11–12/2012 Guest Professor, University of Science and Technology of China, Hefei, China

2012–2017 Advisory Professor, Shanghai Jiao Tong University, China

01/2013 Guest Professor, King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi-Arabia

2013 Clara Immerwahr Lecture, TU Berlin

02–03/2013 Guest Professor, Technical University of Denmark (DTU), Lyngby, Denmark

09/2013 Guest Professor, University of Science and Technology of China, Hefei, China

2015 Giulio Natta Medal in Chemical Engineering and Lectio Magistralis, Politecnico di Milano, Milano, Italy

2016 Award for International Scientific Cooperation of the Chinese Academy of Sciences

2016 National Friendship Award of the People's Republic of China

2017 International Science and Technology Cooperation Award 2016 of the People's Republic of China

2017 Honorary Senator of Bielefeld University

2018 Inauguration Fellow, The Combustion Institute

2018 President's Appreciation Award, The Combustion Institute

2018 Alfred C. Egerton Gold Medal, The Combustion Institute

2018 Honorary Professor, Nanjing University of Science and Technology, China

2018 Crocco Lecture, Department of Mechanical and Aerospace Engineering, Princeton University, USA

2019 Honorary Guest Professor, Institute of Engineering Thermophysics, Chinese Academy of Sciences, Beijing, China

2020 Walther Nernst Denkmünze, Deutsche Bunsen-Gesellschaft für Physikalische Chemie

2021 Hottel Lecture, 38th International Combustion Symposium, Adelaide, Australia

2021 Heilbronner-Hückel Lectures, Swiss Chemical Society, Basel, Bern, Genf, Lausanne, Zürich

2021 Rudolf Günther Medal of the German Section of the Combustion Institute

2023 Honorary Professor, University of Science and Technology of China, Hefei, China

Academies

Since 2008	Elected Member, National Academy of Sciences Leopoldina
Since 2015	Elected Member, National Academy of Science and Engineering acatech
Since 2016	Elected Member, Göttingen Academy of Sciences and Humanities
Since 2017	Elected member, North Rhine-Westphalian Academy of Sciences, Humanities and the Arts
Since 2017	Elected Fellow, European Academy of Sciences
Since 2021	Elected Foreign Member, Chinese Academy of Sciences

Activities in academic organizations / institutions

2002–2016	Board of Directors, The Combustion Institute
2002–2012	Board of Trustees, Volkswagen Foundation
2003–2006	Board, Deutsche Bunsen-Gesellschaft für Physikalische Chemie
2004–2007	Review Board, Deutsche Forschungsgemeinschaft
2004–2012	General Selection Committee, Alexander von Humboldt Foundation
2006–2008	National Evaluation Committee <i>Chemistry</i> , German Council of Science and Humanities
2007–2008	President, Deutsche Bunsen-Gesellschaft für Physikalische Chemie
2007–2013	Board, German Section of the Combustion Institute
2007–2013	Senate and Joint Committee, Deutsche Forschungsgemeinschaft
2007–2013	International Advisory Board, Alexander von Humboldt Foundation
2008–2012	Vice President / President Elect, The Combustion Institute
2008–2013	Senate, Hermann von Helmholtz Association of German Research Centres
2009–2010	Vice President, Deutsche Bunsen-Gesellschaft für Physikalische Chemie
2009–2012	Deputy Chair, General Selection Committee, Alexander von Humboldt Foundation
2012–2016	President, The Combustion Institute
2012–2018	Appointed Member (by Federal President), German Council of Science and Humanities
2016–2020	University Council, Technische Universität Darmstadt
2012–2022	Scientific Advisory Board, Wilhelm and Else Heraeus Foundation
2019–2026	Photon Science Proposal Review Committee, Paul Scherrer Institute (CH)
2021–2022	Extended Board of the Society of German Natural Scientists and Physicians

Editorial functions, conference organization

1997	Vice Chair, Gordon Research Conference on Laser Diagnostics in Combustion, Plymouth, USA
1999	Chair, Gordon Research Conference on Laser Diagnostics in Combustion, Lucca, Italy
2000	Colloquium Co-Chair <i>Reaction Kinetics</i> , 28 th International Combustion Symposium, Edinburgh, UK
2001–2006	Editorial Board, <i>Combustion and Flame</i>
2002	Colloquium Co-Chair <i>Laser Diagnostics</i> , 29 th International Combustion Symposium, Sapporo, Japan
2002–2021	Editorial Board, <i>Progress in Energy and Combustion Science</i>
2003–2013	Editorial Board, <i>Zeitschrift für Physikalische Chemie</i>

- 2004 Colloquium Co-Chair *Laser Diagnostics and Sensors*, 30th International Combustion Symposium, Chicago, USA
- 2004–2010 Editor-in-Chief, *Combustion and Flame*
- 2019 Honorary Editorial Board Member, *Applications in Energy and Combustion Science*
- 2020 Honorary Editorial Board Member, *Physical Chemistry Chemical Physics*
- 2021 Special Issue of *Combustion and Flame*, with Hai Wang, Stanford University, USA
- 2023 Special Issue of *Journal of Physical Chemistry A* with Stephen Klippenstein, Argonne National Laboratory, USA

Scientific advisory committees

- 2002–2005 Scientific Advisory Committee, Forschungszentrum Jülich GmbH
- Since 2002 Physical and Biophysical Chemistry Division Advisory Committee, International Union of Pure and Applied Chemistry
- 2003–2007 Liaison Professor, Fonds der Chemischen Industrie
- 2009–2014 International Advisory Committee of the Combustion Energy Frontier Research Center, Princeton, USA
- Since 2010 International Advisory Board, Center for Combustion Energy, Beijing, China
- 2010–2015 Deputy Speaker, DFG-SFB 686 *Model-based control of homogenized low-temperature combustion*
- 2013–2016 Scientific Advisory Committee, Combustion Research Facility, Sandia National Laboratories, USA
- Since 2013 Scientific Advisory Committee, RESOLV Excellence Center, Bochum
- 2014–2017 Scientific Advisory Board, Clean Combustion Research Center, King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia
- 2015–2023 Scientific Advisory Committee, Cambridge Centre for Carbon Reduction in Chemical Technologies, University of Cambridge, UK, and CARES, Singapore
- 2016–2019 Scientific Advisory Committee, BMBF Kopernikus Project *Power-to-X*, DECHEMA, RWTH Aachen University and FZ Jülich
- Since 2017 Scientific Advisory Board, *The Fuel Design Center*, RWTH Aachen University
- 2020–2024 Scientific Advisory Committee, MERCUR, Science in the Ruhr Area, Mercator Foundation
- Since 2020 Scientific Advisory Board, Center for Nanointegration (CENIDE), Duisburg-Essen University
- Since 2020 Scientific Advisory Board, Princeton University, USA, NSF-EFRI Project *Engineering interfaces between plasma, catalysts, and reactor design for natural gas conversion to liquid products*
- Since 2021 Spokesperson of the Scientific Advisory Board, Clean Circles, TU Darmstadt
- Since 2023 Scientific Advisory Board, Science City Hamburg-Bahrenfeld
- Since 2024 College of Experts, National Research Foundation, Singapore

Award selection committees

- 1995–2002 Selection Jury, Lise Meitner postdoctoral stipends
- 1996–2001 Selection Committee, Bennigsen Foerder Award
- 2005–2013 Selection Committee, August Wilhelm von Hofmann Lecture, German Chemical Society
- 2007–2014 Selection Committee, Otto Hahn Award, German Chemical Society
- 2008–2010 Board, van t'Hoff Award, Deutsche Bunsen-Gesellschaft für Physikalische

Chemie
2010–2014 Board, Otto Hahn Award, German Chemical Society, German Physical Society
and City of Frankfurt
2023 Board, Primo Levi Award of the German and Italian Chemical Societies

University functions

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