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
2017–2024	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	Steinhofer 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	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	Inaugurational 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
2025	Honorary Fellow, Chinese Chemical Society, Beijing, China
2026	Honorary Member, Deutsche Bunsen-Gesellschaft für Physikalische Chemie

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 *Chemistry*, 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)
2021–2026	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, *Reaction Kinetics,* 28th International Combustion Symposium, Edinburgh, UK
2001–2006	Editorial Board, *Combustion and Flame*
2002	Colloquium Co-Chair, *Laser Diagnostics,* 29th International Combustion Symposium, Sapporo, Japan
2002–2026	Editorial Board, *Progress in Energy and Combustion Science*
2003–2013	Editorial Board, *Zeitschrift für Physikalische Chemie*
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*
2019	Committee Leopoldina –CAS *1st Science for Future Conference*, Beijing, China
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
2024	Committee Leopoldina –CAS *2nd Science for Future Conference*, Berlin
2024	Co-Chair International Advisory Committee, *3rd Symposium on Ammonia Energy*, Shanghai, China
2025	Co-Chair Photon Tools for Sustainable Energy Conversion PT-SEC 2025 Conference, Hefei, China
2026	Committee Leopoldina –CAS *3rd Science for Future Conference*, Beijing, China

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
2020–2028	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*
2021–2025	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
Since 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