

## Curriculum vitae

### Prof. Dr. Katharina Kohse-Höinghaus

Physical Chemistry I  
Department of Chemistry  
Bielefeld University  
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Born 18/12/1951 in Hagen, married, 1 daughter



### Education

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- 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

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- 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

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

*teutolab*

- 2002 Award of the Public Understanding of Sciences and Humanities Program  
Stifterverband für die Deutsche Wissenschaft for project *teutolab*-Netzwerk
- 2004 50<sup>th</sup> 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 Professorship, University of Science and Technology of  
China (USTC), Hefei, China
- 2009 Keynote Lecture, 30<sup>th</sup> 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 43<sup>th</sup> 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 (USTC),  
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 (USTC),  
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 Inaugurational Fellow, The Combustion Institute
- 2018 President's Appreciation Award, The Combustion Institute
- 2018 Alfred C. Egerton Gold Medal, 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 Honorary Guest Professorship, Institute of Engineering Thermophysics,  
Chinese Academy of Sciences, Beijing, China
- 2020 Walther Nernst Denkmünze, Deutsche Bunsen-Gesellschaft für Physikalische  
Chemie
- 2021 Hottel Lecture, 38<sup>th</sup> 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

## Academies

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- 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

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- 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)
- 2021–2022 Extended Board of the Society of German Natural Scientists and Physicians

## Editorial functions, conference organization

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- 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*, 28<sup>th</sup> International Combustion Symposium, Edinburgh, UK
- 2001–2006 Editorial Board, *Combustion and Flame*
- 2002 Colloquium Co-Chair *Laser Diagnostics*, 29<sup>th</sup> 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 <i>Laser Diagnostics and Sensors</i> , 30 <sup>th</sup> International Combustion Symposium, Chicago, USA
2004–2010	Editor-in-Chief, <i>Combustion and Flame</i>
2019	Honorary Editorial Board Member, <i>Applications in Energy and Combustion Science</i>
2020	Honorary Editorial Board Member, <i>Physical Chemistry Chemical Physics</i>

## Scientific advisory committees

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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 <i>Model-based control of homogenized low-temperature combustion</i>
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
2015–2021	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 <i>Power-to-X</i> , DECHEMA, RWTH Aachen University and FZ Jülich
Since 2017	Scientific Advisory Board, <i>The Fuel Design Center</i> , RWTH Aachen University
Since 2020	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 <i>Engineering interfaces between plasma, catalysts, and reactor design for natural gas conversion to liquid products</i>
Since 2021	Spokesperson of the Scientific Advisory Board, Clean Circles, TU Darmstadt

## Award selection committees

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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

## University functions

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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