

# Curriculum vitae Prof. Klaus-Müllen, emeritus professor at MPI-P

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## Personal information

Name Professor Klaus Müllen  
Date and place of birth Cologne, 02.01.1947  
Business address Max Planck Institute for Polymer Research  
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## Professional Career

1966–1969 Studies in Chemistry, University of Cologne  
1969 Degree in Chemistry (Professor E. Vogel)  
1971 PhD-work, University of Basel (Professor F. Gerson)  
1972–1978 Postdoctoral training and Habilitation (Professor J.F.M. Oth), ETH Zürich  
1979–1984 Professor University of Cologne  
1984–1989 Professor University of Mainz  
1988 Offer from the University of Göttingen  
1989 Scientific Member of the Max-Planck-Society and Director at the Max Planck Institute for Polymer Research  
1992 Offer from the University of Cologne

## Professional Duties

1995 Member of the Editorial Boards of Macromolecular Chemistry and Physics, Journal of Materials Chemistry, Journal of Macromolecular Science, Pure and Applied Chemistry  
1995-2011 Editor of Synthetic Metals  
1998 Editor of Polymer Bulletin  
1998 Member of the Evaluation Committee of Chemistry Departments in North Rhine Westphalia (Germany)  
1999 Member of the Selection Committee of the Alexander-von-Humboldt- Foundation  
2000 Member of the Advisory Board of the Center of Nanoscience, University of Munich  
2001 Member of the Evaluation Committee for Chemistry in the Netherlands  
2003 Member of the Editorial Board of the Journal of the American Chemical Society  
Chairman of the Advisory Committee of Eidgenössisches Materialprüfungsamt  
2004 Member of the Editorial Board of Chemistry of Materials  
2005 Member of the Editorial Board of Chemistry Letters  
Member of the Editorial Board of Chemistry World  
Member of the Editorial Board of Accounts of Chemical Research  
2006 Member of the Editorial Board of Macromolecules  
Member of the Editorial Board of Macromolecules – An Indian Journal, BioChemistry – An Indian Journal  
Member of the International Advisory Board of Chemistry – An Asian Journal  
Member of the Senate Committee of the German Science Foundation  
Associate Editor of the Journal of the American Chemical Society  
2008-2009 President of the German Chemical Society

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- 2009: Head of Competence Center „Innovation Lab (IL)“, Heidelberg  
2010 - Member of the Advisory Council Mercator Foundation, Essen  
2011-2017 Member of the Senate of the Max Planck Society  
2012 Member of the Editorial Board of BioNanoMaterials  
Member of the administrative board of the Max Planck Institute for Coal Research  
2013-2014 President of the German Association for the Advancement of Science and Medicine  
2015 Member of the Advisory Board of the International Conference on the Science and Technology of Synthetic Metals ICSM  
Member of The ECME Steering Committee  
Member of the Advisory Board of the Center for NanoScience, Munich  
Member of the Advisory Board « Quantum Effects in Electronic Nanodevices“  
Member of the Spinoza Selection Committee for the Netherlands Organization for Scientific Research  
Member of the International Advisory Committee of State Key Laboratory of Physical Chemistry of Solid Surfaces of Xiamen University  
Member of the iChem International Advisory Board (Collaborative Innovation Center of Chemistry for Energy Materials)  
Chair of the Assessment Committee for Technical Universities of the Netherlands  
2016 Member of the Editorial Advisory Board « ChemPhotoChem »  
Member of the Scientific Advisory Board of the Center of Advancing Electronics Dresden of the TU Dresden  
2018 Member of the Editorial Advisory Board of « Polymers »  
2019 Member of the Advisory Board of Material Chemistry Frontiers  
Member of the Advisory Board of Science China Chemistry  
Chairman of the Scientific Committee of the International Centre for Innovative Biomaterials Research (ICRI-BioM)  
2020 Member of the Editorial Board of Dyes and Pigments

### **Awards and Lectureships**

- 1990 Visiting Professor, University of Osaka (JSPS)  
1993 Max-Planck-Research-Prize  
Honorary Professor, East China University of Technology, Shanghai  
1995 Richard-Willstätter-Lecturer, Jerusalem  
Honorary Professor University Mainz  
1996 Capita-Selecta-Lecturer, Katholieke University of Leuven  
1997 Philip-Morris-Research-Prize  
Melville-Lecturer, University of Cambridge  
1998 Visiting Professor, University of Rennes  
2000 Bruno-Werdelmann-Lecturer, University of Essen  
2001 Honorary Doctorate, University of Sofia  
Bayer Distinguished Lecturer, Washington University, St. Louis  
Smets-Lecturer, Belgium  
2001 Nozoe-Award, San Diego  
2002 Lane Lecturer, Champaign, University of Urbana  
Kyoto University Foundation Award  
2003 Science Award of the Stifterverband  
2005 Deutschland in Japan Lectureship Award of the Chemical Society Japan  
2006 International Award of the Belgian Polymer Group

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- Honorary Professor, Chinese Academy of Sciences, Institute of Applied Chemistry, Changchun  
Butler Lecturer, University of Florida, Gainesville  
Barré Lecturer, University of Montreal  
Bender Lecturer, Northwestern University, Evanston  
ICI Distinguished Lecturer, University of Calgary
- 2007 Otto-Bayer-Lecturer, University of Cologne
- 2008 Hermanos Elhuyar – Hans Goldschmidt Award of the Spanish Chemical Society  
Visiting Professor, University of Bordeaux  
Honorary Professor, Institute of Chemistry, Beijing, Chinese Academy of Sciences  
Bayer Lecturer, University of Pittsburgh  
S. Kwolek Lecturer, Carnegie Mellon University,  
Innovation Award of the State of North Rhine Westphalia  
Nicolaus August Otto Award
- 2009 Visiting Scientist, University of Marseille  
Society of Polymer Science Japan International Award  
Honorary Professor, Jiao Tong University, Shanghai, China,  
Honorary Professor University of Heidelberg  
Honorary Member of the Israel Chemical Society
- 2010 Honorary Doctorate, Karlsruhe Institute of Technology
- 2011 ACS Award in Polymer Chemistry  
Tsungming Tu Award of the National Science Councils, Taiwan  
Distinguished Visiting Professor, National University Singapore
- 2012 BASF-Award for Organic Electronics  
Einstein Professor, Chinese Academy of Science  
Gordon Stone Lecturer, University of Bristol  
Honorary Doctorate, Jiao Tong University, Shanghai
- 2013 Franco-German Award of the Société Chimique de France  
Adolf-von-Baeyer-Medal, German Chemical Society  
Utz-Hellmuth-Felcht Award of the SGL Group  
ChinaNANO Award
- 2014 Carl Friedrich Gauß-Medal, Braunschweigische Wissenschaftliche Gesellschaft  
ACS Nano Lectureship Award
- 2015 J. T. Donald Lecturer, McGill University, Montreal  
The Thomas Graham Lecturer, University of Strathclyde, Glasgow  
Honorary Doctorate, University of Ulm  
van't Hoff Award, Royal Netherlands Academy of Sciences
- 2016 Honorary Professor, Beijing University of Chemical Technology  
Fellow of the Gutenberg Research College  
Herbert C. Brown Lecturer at Purdue University  
Hermann-Staudinger-Award, German Chemical Society  
Honorary Doctorate, University of Cologne
- 2017 Award of the Academy of Sciences and Humanities in Hamburg  
Principal Distinguished Professor, Dongguan University of Technology
- 2018 Honorary Doctorate, Technion Israel Institute of Technology  
Paul G. Gassmann Lecturer, University of Minnesota  
IKCOC Prize 2018, The 14th International Kyoto Conference on New Aspects of Organic Chemistry, November 2018
- 2019 Honorary Doctorate, University of Patras, Greece

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Karl-Ziegler-Award of the German Chemical Society  
Cothenius Medal, German National Academy of Sciences Leopoldina  
Honorary Professor, Northwestern Polytechnical University, Xian  
Award for Excellent Supervisors of Chinese PhD Students, GCCCD (Society of Chinese Chemists and Chemical Engineers in the Federal Republic of Germany)  
2020 Spiers Memorial Award of the Royal Society of Chemistry  
Honorary Professor, University of Cologne  
Leonardo da Vinci Award 2020 of the European Academy of Sciences

### **Academy memberships**

1999 Member of the German National Academy of Sciences Leopoldina  
2012 Member of the North Rhine-Westphalian Academy for Sciences and Arts  
2013 Member of the American Academy of Arts & Sciences  
2015 Member of the European Academy of Sciences (EURASC)  
Corresponding member of the Braunschweigische Wissenschaftliche Gesellschaft  
2017 Member of the Academia Europaea  
Member of acatech – National Academy of Science and Engineering  
2019 Corresponding member of the Saxon Academy of Sciences and Humanities in Leipzig

### **Research targets**

- Graphenes and carbon materials;
- new polymer-forming reactions ;
- multi-dimensional polymers with complex shape-persistent architectures;
- functional polymeric networks, in particular for catalytic purposes;
- dyes and pigments;
- chemistry and physics of single molecules;
- molecular materials with liquid crystalline properties for electronic and optoelectronic devices;
- biosynthetic hybrids;
- nanocomposites.

### **Major scientific contributions**

> 2045 scientific publications (Source: Scopus, September 15, 2020)  
h-index : 154 (Source : Scopus, September 15, 2020)  
> 50 former associates are now professors in academic institutions worldwide

### Top-10 most-cited papers (Scopus)

1. Title: Transparent, conductive graphene electrodes for dye-sensitized solar cells  
Authors: Wang, Xuan; Zhi, Linjie; Muellen, Klaus  
Source: NANO LETTERS Volume: 8 Issue: 1 Pages: 323-327  
Published: JAN 2008  
Times cited: 3650
2. Title: Atomically precise bottom-up fabrication of graphene nanoribbons  
Authors: Cai, Jinming; Ruffieux, Pascal; Jaafar, Rached; et al.  
Source: NATURE Volume: 466 Issue: 7305 Pages: 470-473  
Published: JUL 2010  
Times cited: 2200
3. Title: Self-organized discotic liquid crystals for high-efficiency organic photovoltaics  
Authors: Schmidt-Mende, L; Fechtenkötter, A; Muellen, K; et al.  
Source: SCIENCE Volume: 293 Issue: 5532 Pages: 1119-1122  
Published: AUG 2001  
Times cited: 2159
4. Title: Graphenes as potential material for electronics  
Authors: Wu, Jishan; Pisula, Wojciech; Muellen, Klaus  
Source: CHEMICAL REVIEWS Volume: 107 Issue: 3 Pages: 718-747  
Published: MAR 2007  
Times cited: 2000
5. Title: 3D Nitrogen-Doped Graphene Aerogel-Supported Fe<sub>3</sub>O<sub>4</sub> Nanoparticles as Efficient Electro-catalysts for the Oxygen Reduction Reaction  
Authors: Wu, Zhong-Shuai; Yang, Shubin; Sun, Yi; et al.  
Source: JOURNAL OF THE AMERICAN CHEMICAL SOCIETY Volume: 134 Issue: 22 Pages: 9082-9085  
Published: JUN 2012  
Times cited: 1687
6. Title: Large single-molecule fluorescence enhancements produced by a bowtie nanoantenna  
Authors: Kinkhabwala, Anika; Yu, Zongfu; Fan, Shanhui; et al.  
Source: NATURE PHOTONICS Volume: 3 Issue: 11 Pages: 654-657  
Published: NOV 2009  
Times cited: 1431
7. Title: Big is beautiful - "Aromaticity" revisited from the viewpoint of macromolecular and supramolecular benzene chemistry  
Authors: Watson, MD; Fechtenkötter, A; Mullen, K  
Source: CHEMICAL REVIEWS Volume: 101 Issue: 5 Pages: 1267-1300  
Published: MAY 2001  
Times cited: 1119

8. Title: Nitrogen-Doped Ordered Mesoporous Graphitic Arrays with High Electrocatalytic Activity for Oxygen Reduction

Authors: Liu, Ruili; Wu, Dongqing; Feng, Xinliang; et al.

Source: ANGEWANDTE CHEMIE-INTERNATIONAL EDITION Volume: 49

Issue: 14 Pages: 2565-2569

Published: MAR 2010

Times cited: 1048

9. Title: Three-Dimensional Nitrogen and Boron Co-doped Graphene for High-Performance All-Solid-State Supercapacitors

Authors: Wu, Zhong-Shuai; Winter, Andreas; Chen, Long; et al.

Source: ADVANCED MATERIALS Volume: 24 Issue: 37 Pages: 5130-5135

Published: SEP 2012

Times cited: 1001

10. Title: Efficient synthesis of heteroatom (N or S)-doped graphene based on ultrathin graphene oxide-porous silica sheets for oxygen reduction

Authors: Yang S., Zhi L., Tang K., Feng X., et al.

Source: Advanced Functional Materials, Volume: 22, Issue: 17, Pages 3634-3640

Published: SEP 2012

Times cited: 954