

Prof. Dr. Carsten Reinhard

Personal details

Position President and CEO, Chemical Heritage Foundation, Philadelphia, USA
Institution Chemical Heritage Foundation, Philadelphia, USA

Education

2003 Habilitation in History of Science, University of Regensburg
1996 Ph.D., History of Science and Technology, Technical University of Berlin
1992 M.A., History of Science and Technology, History, and Chemistry, Technical
 University of Berlin
1985-1992 Studium der Geschichte der Naturwissenschaften und Technik, Geschichte und
 Chemie, Universität Stuttgart und TU Berlin

Professional Experience

since 2013 President and CEO, Chemical Heritage Foundation, Philadelphia, USA
since 2007 Professor for History of Science, University of Bielefeld
2006-2007 Research Fellow, Max-Planck-Institute for the History of Science, Berlin
2005-2006 Stand-In, Chair for History of Science, Friedrich-Schiller-University, Jena
2003-2005 Associate Professor, History of Science Unit, University of Regensburg
1997-2003 Assistant Professor, History of Science Unit, University of Regensburg
1996-1997 Instructor, History of Science Unit, University of Regensburg
1995 Research Fellow, Research Center on History and Philosophy of Science,
 Berlin

Further professional qualifications

Awards

2004 Habilitationspreis der Universität Regensburg
2004 Paul-Bunge-Preis der Hans R. Jenemann-Stiftung für Geschichte
 wissenschaftlicher Instrumente
2003 Georg-Uschmann-Preis für Wissenschaftsgeschichte der Deutschen Akademie
 der Naturforscher Leopoldina
2000 ABB Wissenschaftspreis

Fellowships

- 2010/2011 Fellow, Max-Planck-Institute for the History of Science, Berlin
- 2010, March Visiting Professor (Professeur Invité), Ecole Normale Supérieure, Department of Philosophy, Paris
- 2008/2009 Visiting Professor, Groupe d'Etude des Méthodes de l'Analyse Sociologique (CNRS, Université Paris IV), Paris
- 2006/2007 Fellow at the Center for Interdisciplinary Studies (ZiF), Bielefeld
- 1998-1999 Edelstein International Fellowship, Philadelphia, USA, and Jerusalem, Israel
- 1994 Fellowship at the Edelstein Center for the History of Science, Technology, and Medicine, Hebrew University, Jerusalem, Israel

Memberships

- 2015 Mitglied der Deutschen Akademie der Naturforscher Leopoldina – Nationale Akademie der Wissenschaften

University Service

- 2009-2011 Speaker of the DFG Research Training Unit (GK 724) “Entering the Knowledge Society,” University of Bielefeld
- 2008-2010 Member, Senate, University of Bielefeld
- 2007-2012 Director, Institute for Science and Technology Studies, Bielefeld
- 2000-2001 Member, Senate, University of Regensburg

Community Service

- 2014-present Member, Editorial Board of *Hyle. International Journal for Philosophy of Chemistry*
- 2012-2015 Vice Chairman, German Society for the History of Medicine, Science and Technology (DGGMNT)
- 2012-present Member, Editorial Board of *Nuncius. Journal for the Material and Visual History of Science*
- 2009-2012 Chairman of the Working Party for the History of Chemistry, European Association for Chemical and Molecular Sciences
- 2009-present Member, Editorial Board of *Science and Technology Studies*, Nomos
- 2008-present Member, Editorial Board of *Berichte zur Wissenschaftsgeschichte*
- 2007-present Member, Council of the Society for the History of Alchemy & Chemistry
- 2007-2012 Chairman of the Working Party for the History of Chemistry, German Chemical Society
- 2006-2008 Subject Editor Chemistry, *Dictionary of Scientific Biography*
- 2001-present Member, Editorial Board of AMBIX, Journal for the Society for the History of Alchemy & Chemistry, London
- 1997-2013 Council Member of the Commission on the History of Modern Chemistry (IUHPS-DHST)

Organization of Conferences

- 2012 with Ursula Klein
"Between Material Substances and Abstract Ideas: Chemists' Objects of Inquiry, 18th-21st Centuries," Chemical Heritage Foundation, Philadelphia.
- 2011 Berlin, with Stefan Bösch et al.
"Science as Narrative, Narration in Science," organized on behalf of the Society for Science and Technology Studies, and the Society for the History of Science
- 2011 with Gisela Boeck
"8th International Conference on the History of Chemistry", European Association for Chemical and Molecular Sciences, Universität Rostock.
- 2010 with Michael Gordin and Ursula Klein
"Scientific Objects and their Materiality in the History of Chemistry", Max-Planck-Institute for the History of Science, Berlin.
- 2009 with Klaus Hentschel
"History of Materials Science," Working Parties for History of Chemistry and History of Physics of the German Physical Society and the German Chemical Society
- 2009 with Christine Nawa and Thomas Steinhauser
Workshop "The Power of the Margins. Construction and Transformation of Disciplinary Identities in Historical Perspective", Universität Regensburg.
- 2001 with Peter Zigman
International Conference with the Universities of Prague, Bratislava, and Regensburg: "The Biographical Approach in the History and Philosophy of Science"
- 2000 with Peter J. T. Morris et al.
Second International Conference of the Commission on the History of Modern Chemistry: "From the Test-tube to the Autoanalyzer. The Development of Chemical Instrumentation in the Twentieth Century", Imperial College London.
- 1999 with Christoph Meinel
First International Conference of the Commission on the History of Modern Chemistry: "Between Physics and Biology: Chemical Sciences in the Twentieth Century", Deutsches Museum München.

Grants

- 2011-2015 "History of the Max Planck Institute for Chemistry," funded by the MPI for Chemistry (one research position, subsidies)
- 2010-2014 "Accelerator Technology and Particle Therapy," funded by DFG (one research position, and subsidies)
- 2010-2014 "Regulatory Knowledge," funded by DFG (one research position, and subsidies)
- 2010-2013 "Expertise and Public Sphere," funded by DFG (conferences and subsidies)
- 2007-2010 "Regulatory Science," funded by DFG (one research position, and subsidies)

- 2007-2012 “History of the German Chemical Society during National Socialism,“ funded by the German Chemical Society (with Prof. Dr. H. Maier, Bochum)
- 2004-2007 “Innovation Networks,“ funded by DFG (one research position at Pre-Doc level, subsidies)
- 2000-2003 “Technologies of the Laboratory,“ funded by DFG with travel allowances and subsidies

Publications (selection)

Books

Forschung in der chemischen Industrie. Die Entwicklung synthetischer Farbstoffe bei BASF und Hoechst, 1863 bis 1914. Freiberg: Technische Universität Bergakademie Freiberg 1997. (Freiberger Forschungshefte, Reihe D: Wirtschaftswissenschaften, Geschichte, Bd. 202). 400 pp.

With Anthony S. Travis: *Heinrich Caro and the Creation of Modern Chemical Industry.* Dordrecht: Kluwer Academic Publishers, 2000. (Chemists and Chemistry, 19). 470 pp.

Shifting and Rearranging. Physical Methods and the Transformation of Modern Chemistry. Sagamore Beach, Mass.: Science History Publications, 2006. 438 pp.

Edited Volumes

Chemical Sciences in the 20th Century. Bridging Boundaries. With a Foreword by Roald Hoffmann. Weinheim: Wiley-VCH 2001. 300 pp.

With Harm G. Schröter, *Academia and Industry in Chemistry: The Impact of State Intervention, and the Effects of Cultural Values*, special issue of *Ambix* 51, no. 2 (2004). 185 pp.

With Beat Bächi, *Zur Geschichte des Regulierungswissens*. Special Issue of *Berichte zur Wissenschaftsgeschichte* 33, no. 4 (2010).

With Klaus Hentschel, *Zur Geschichte der Materialforschung*, Special Issue of *N.T.M. Journal of History of Science Technology, and Medicine*, 19, no. 1 (2011).

With Horst Kant, *100 Jahre Kaiser-Wilhelm- / Max-Planck-Institut für Chemie (Otto Hahn Institut). Facetten seiner Geschichte* (Veröffentlichungen aus dem Archiv der Max-Planck-Gesellschaft, 22). Berlin: Archiv der Max-Planck-Gesellschaft 2012.

With Ursula Klein, *Objects of Chemical Inquiry*. Sagamore Beach: Science History Publications 2014.

With Alfons Bora and Anna Henkel, *Wissensregulierung und Regulierungswissen*. Weilerswist: Velbrück Wissenschaft 2014.

With Safia Azzouni and Stefan Bösch, *Erzählung und Geltung. Wissenschaft zwischen Autorschaft und Autorität*. Weilerswist: Velbrück Wissenschaft 2015.

Articles

1. With Hans-Werner Schütt, "Christian Friedrich Schönbein und die Frühgeschichte der Katalysatorforschung," *Mitteilungen der Fachgruppe Geschichte der Chemie der GDCh* 6 (1991), 18-28.
2. "Was die Welt zusammenhält. Die Entwicklung der Chemie von Kalk und Zement," in Helmuth Albrecht et al., *Kalk und Zement in Württemberg. Industriegeschichte am Südrand der Schwäbischen Alb*, Ubstadt-Weiher: Verlag Regionalkultur 1991, pp. 45-57.
3. "Christian Friedrich Schönbein (1799-1868). Schießbaumwolle und Ozon," in Helmuth Albrecht, ed., *Schwäbische Forscher und Gelehrte. Lebensbilder aus sechs Jahrhunderten*, Stuttgart: DRW-Verlag 1992, pp. 87-91.
4. "Die Farbe Blau: Indigo," in Hartmut Walravens, ed., *Ein blaues Wunder. Blaudruck in Europa und Japan*, Berlin: Akademie-Verlag 1993, pp. 14-24.
5. "Über Wissenschaft und Wirtschaft. Fritz Habers Zusammenarbeit mit der BASF, 1908-1911," in Helmuth Albrecht, ed., *Naturwissenschaft und Technik in der Geschichte. 25 Jahre Lehrstuhl für Geschichte der Naturwissenschaft und Technik an der Universität Stuttgart*, Stuttgart: GNT-Verlag 1993, pp. 286-315.
6. "Vom Alizarinblau zum Thallin. Pharmazeutisch-chemische Forschung der BASF in den achtziger Jahren des 19. Jahrhunderts," in Hans-Werner Schütt, Burghard Weiss, eds, *Brückenschläge. 25 Jahre Lehrstuhl für Geschichte der exakten Wissenschaften und der Technik an der Technischen Universität Berlin*, Berlin: Verlag für Wissenschafts- und Regionalgeschichte 1995, pp. 253-276.
7. With Peter Frieß, Ralf Hahn, Peter M. Steiner, "Adolf Butenandt im Gespräch," in Peter Frieß, Peter M. Steiner, eds, *Deutsches Museum Bonn. Forschung und Technik in Deutschland nach 1945*, München: Deutscher Kunstverlag 1995, pp. 187-196.
8. With Anthony S. Travis, "The Introduction of Aniline Dyes to Paper Printing and Queen Victoria's Postage Stamps," *Ambix* 44 (1997), 11-18.
9. "An Instrument of Corporate Strategy: The Central Research Laboratory at BASF, 1868-1890," in Ernst Homburg, Harm Schröter, Anthony S. Travis, eds, *Chemical Technology and the Second Industrial Revolution: Economic Growth, Environmental Pollution, and the Rise of the Industrial Chemist*, Dordrecht: Kluwer 1998, pp. 239-259.
10. "Basic Research in Industry. Two Case Studies at I.G. Farbenindustrie AG in the 1920s and 1930s," in: Ernst Homburg, Peter J.T. Morris, Harm Schröter, Anthony S. Travis eds, *Determinants in the Evolution of the European Chemical Industry, 1900-1939: New Technologies, Political Frameworks, Markets, and Companies*, Dordrecht: Kluwer 1998, pp. 67-88.
11. With Helmuth Albrecht, "Die Kalk- und Zementindustrie im Alb-Donau-Raum nach 1945," in Wolfgang Schürle, ed., *Wirtschaftsgeschichte im Raum Ulm. Entwicklungslinien im Alb-Donau-Kreis seit 1945*, Ulm: Süddeutsche Verlagsgesellschaft 1998, pp. 117-150 (Alb und Donau, Kunst und Kultur 15).
12. "Disciplines, Research Fields, and their Boundaries," in Carsten Reinhardt, ed., *Chemical Sciences in the 20th Century. Bridging Boundaries*, Weinheim: Wiley-VCH 2001, pp. 1-13.

13. With Peter J.T. Morris and Anthony S. Travis, "Research Fields and Boundaries in Twentieth-Century Organic Chemistry," in Carsten Reinhardt, ed., *Chemical Sciences in the 20th Century. Bridging Boundaries*, Weinheim: Wiley-VCH 2001, pp. 14-42.
14. With Anthony S. Travis, "Aspects of Paper Tools in the Industrial-Academic Context: Constitutions and Structures of Aniline Dyes, 1860-1880," in Ursula Klein, ed., *Tools and Modes of Representation in the Laboratory Sciences*, Dordrecht: Kluwer 2001, pp. 79-94 (Boston Studies in the Philosophy of Science, 222).
15. "The Chemistry of an Instrument. Mass Spectrometry and Structural Organic Chemistry," in Peter J. T. Morris, ed., *From Classical to Modern Chemistry: The Instrumental Revolution*, Cambridge: Royal Society of Chemistry, 2002, pp. 229-247.
16. "Instrument der Einheit? Nuclear Magnetic Resonance und chemische Forschung um 1950," in Astrid Schürmann, Burghard Weiss, eds., *Chemie - Kultur - Geschichte. Festschrift für Hans-Werner Schütt anlässlich seines 65. Geburtstages*, Berlin: GNT-Verlag 2002, pp. 327-337.
17. "Chemistry in a Physical Mode. Molecular Spectroscopy and the Emergence of NMR," *Annals of Science* 61 (2004), 1-32.
18. With Anthony S. Travis: "Wahrnehmungen und Realitäten der deutschen industriellen Forschung (1880-1925)," in Rolf Petri, ed., *Technologietransfer aus der deutschen Chemieindustrie (1925-1960)*, Berlin: Duncker & Humblot, 2004, pp. 31-48.
19. "Chemie und Geschichte: gesagt und getan, gemacht und erzählt," in Klaus Griesar, ed., *Wenn der Geist die Materie küßt, Annäherungen an die Chemie*, Frankfurt am Main: Harri Deutsch 2004, pp. 9-21.
20. With Harm G. Schröter, "Academia and Industry in Chemistry. The Impact of State Intervention and the Effects of Cultural Values," *Ambix* 51 (2004), 99-106.
21. "Nuovi ambiti di indagine della chimica," in *Storia della Scienza*, ed. Sandro Petruccioli, Rome: Istituto della Enciclopedia Italiana, vol. 8 (2004), pp. 513-522.
22. "A Lead User of Instruments in Science. John D. Roberts and the Adaptation of Nuclear Magnetic Resonance to Organic Chemistry, 1955-1975," *Isis* 97 (2006), 205-236.
23. "Wissenstransfer durch Zentrenbildung. Physikalische Methoden in der Chemie und den Biowissenschaften," *Berichte zur Wissenschaftsgeschichte* 29 (2006), 224-242.
24. "Heinrich Caro in Wissenschaft und Industrie," in Peter Zigman, Hrsg., *Die biographische Spur in der Kultur- und Wissenschaftsgeschichte*, Jena: edition Paideia 2006, pp. 181-194
25. "Physikalische Methoden in der Chemie, ca. 1960. Implementierung und Strategien der Durchsetzung," *Dahlemer Archivgespräche* 13 (2007), 29-48.
26. With Thomas Steinhauser, "Formierung einer wissenschaftlich-technischen Gemeinschaft. NMR-Spektroskopie in der Bundesrepublik Deutschland," *N.T.M., Journal of the History of Science, Technology, and Medicine* 16 (2008), 73-101.
27. "Boundary Values," in: Viola Balz, Alexander v. Schwerin, Heiko Stoff, Bettina Wahrig, eds., *Precaious Matters / Prekäre Stoffe, The History of Dangerous and Endangered Substances in the 19th and 20th Centuries*, Berlin 2008 (Pre-print Series of the Max Planck Institute for the History of Science, No. 356), 39-50.
28. "Historische Wissenschaftsforschung, heute. Überlegungen zu einer Geschichte der Wissensgesellschaft," *Berichte zur Wissenschaftsgeschichte* 33 (2010), 81-99.

29. "Zentrale einer Wissenschaft. Methoden, Hierarchie und die Organisation der chemischen Institute," in: Rüdiger vom Bruch and Heinz-Elmar Tenorth, eds., *Geschichte der Universität Unter den Linden 1810-2010. Biographie einer Institution, Praxis ihrer Disziplinen*, Vol. 5, *Transformation der Wissensordnung. Verwissenschaftlichung der Gesellschaft und Verstaatlichung der Wissenschaft*, Berlin: Akademie Verlag 2010, pp. 575-603.
30. "Regulierungswissen und Regulierungskonzepte," *Berichte zur Wissenschaftsgeschichte* 33 (2010), 351-364.
31. "Max-Planck-Institut für Chemie. Berlin – Mainz," in: Peter Gruss, Reinhard Rürup, eds., *Denkorte. Max-Planck-Gesellschaft und Kaiser-Wilhelm-Gesellschaft. Brüche und Kontinuitäten*, Dresden: Sandstein 2010, pp. 256-265.
32. "Expertise in Methods, Methods of Expertise," in: Martin Carrier, Alfred Nordmann, eds., *Science in the Context of Application*, Dordrecht: Springer 2011, pp. 143-159 (Boston Studies in the Philosophy of Science 274).
33. "Habitus, Hierarchien und Methoden. 'Feine Unterschiede' zwischen Physik und Chemie," *N.T.M., Journal of the History of Science, Technology, and Medicine* 19 (2011), 125-146.
34. "Limit Values and the Boundaries of Science and Technology," *Comptes Rendus Chimie* 15, 7 (2012), 595-602. (Special issue *Historie de la Chimie*, ed. Yves Jeannin.)
35. "Massenspektroskopie als methodische Klammer des Instituts, 1939-1978," in: id., Horst Kant, eds., *100 Jahre Kaiser-Wilhelm- / Max-Planck-Institut für Chemie (Otto Hahn Institut). Facetten seiner Geschichte* (Veröffentlichungen aus dem Archiv der Max-Planck-Gesellschaft, 22), Berlin: Archiv der Max-Planck-Gesellschaft 2012, pp. 99-131.
36. "Forschungstechnologien im 20. Jahrhundert: Transfer und Transformationen," in: Klaus Hentschel, ed., *Zur Geschichte der Forschungstechnologien: Generizität, Interstitialität & Transfer*, Diepholz: GNT-Verlag 2012, pp. 277-307.
37. With Paul Crutzen and Gregor Lax: "Paul Crutzen on the Ozone Hole, Nitrogen Oxides and the Nobel Prize," *Angewandte Chemie International Edition* 52 (2013), 48-50.
38. "The Olfactory Object. Toward a History of Smell in the Twentieth Century," in Ursula Klein, Carsten Reinhardt, eds., *Objects of Chemical Inquiry*. Sagamore Beach: Science History Publications 2014, pp. 321-341.
39. "Sites of Chemistry in the Twentieth Century," *Ambix* 62 (2015), 1-5.

Papers Presented at Major Meetings

- "An Instrument of Corporate Strategy: The Central Research Laboratory at BASF,"
Workshop *Strategies of Chemical Industrialization: From Perkin to Bosch 1856-1918*,
European Science Foundation, Maastricht, 23 March 1995
- "Basic Research in Industry: Chemistry at I.G. Farben in the 1920s and 1930s," Workshop
Determinants in the Evolution of Chemistry - Political Framework, Markets, and Companies, 1900-1939,
European Science Foundation, Strasbourg, 4 October 1996
- "Macromolecules and Plastics - Basic and Applied Research. Research Policy at the Central
Research Laboratory of I.G. Farbenindustrie AG, 1925-32," *International Congress of
History of Science*, IUHPS/DHS, Liège, 22 July 1997

“R&D in the German Chemical Industry,” CHMC Workshop *Recent Issues in the Historiography of Science*, Jerusalem, 23 July 1998

“Physikalisches Experiment, personale Identität, chemische Öffentlichkeit: H.S. Gutowsky und die Entwicklung der NMR in den USA der 1950er und 1960er Jahre,” DGGMNT, Leipzig, 26 September 1999

“Reinventing Nuclear Magnetic Resonance for Chemistry: Herbert S. Gutowsky Between Disciplines and Identities,” HSS, Annual Meeting, Pittsburgh, 5 November 1999

Commentary at a symposium on the history of industrial research (organized by Marc de Vries), SHOT, Annual Meeting, Munich, 20 August 2000

“The Chemistry of an Instrument: Mass Spectroscopy and Structural Organic Chemistry,” CHMC Second International Conference, London, 11 August 2000

“German Leadership? Myths and Realities of Industrial Research,” International Workshop *Technology Transfer from the German Chemical Industry 1925-60*, Wittenberg, 20 April 2001

“Physikalische Instrumente und chemische Forschung: NMR und Massenspektrometrie seit 1945,” Jenemann-Symposium, Fachgruppe Geschichte der Chemie in der GDCH, Würzburg, 25 September 2001

“The Instrument and Organic Chemistry. A Dynamic Approach to the Triangle of Manufacturers, Users, and Sponsors,” CHMC Third International Conference, Philadelphia, 5 October 2002.

“Bastler, Entwickler, Meinungsmacher. Anpassungsprozesse physikalischer Instrumente in der Chemie,” DGGMNT, Freiberg/Sa., 28 September 2003.

“Marktplätze des Wissens. Instrumente und ihre Zentren zwischen den Disziplinen,” Historikertag Kiel, 16 September 2004.

“Experten zwischen Wissenschaft, Staat und Öffentlichkeit,” DGGMNT, Jahrestagung Mainz, 25 September 2004.

Commentary at the Symposium “Geschichte der Kaiser-Wilhelm-Gesellschaft im Nationalsozialismus,” Berlin, 17 March 2005.

“Wege des Instruments. Wissenschaftstransfer in den Naturwissenschaften, 1950-1980,” Tagung der Gesellschaft für Wissenschaftsgeschichte, Wien, 7 May 2005.

“Electronics Meets Chemistry,” Working Party on History of Chemistry, European Association for Chemical and Molecular Sciences, 5. International Conference, Lisbon, 8 September 2005.

“Knowledge as Expertise. The Interactive Development of Analytical Chemistry and the Juridical System in Germany, ca. 1850,” History of Science Society Annual Meeting, Vancouver, 4 November 2006.

“Applied Neighborhood. Physical Methods and their Perception in Chemistry,” 6th International Conference on the History of Chemistry, Leuven, 29 August 2007.

“Innovation Spectrum,” Royal Society of Chemistry, London, 14 February 2008.

“Boundary Values,” SLSA, Berlin, 6 June 2008.

“Science in a closed context: the case of industrial research, ca. 1900,” European Science Open Forum, Barcelona, 21 July 2008.

“Machines and Scientists in the Laboratory,” Symposium Chemistry Meets the Public, 2nd EuCheMs Chemistry Congress, Turin, 18 September 2008.

“Historische Wissenschaftsforschung heute,” Conference of the Institute for History of Medicine and Science Studies, Medizinische Universität Lübeck, 14 December 2008.

“Methoden der Physik und Chemie,” Plenarvortrag, Tagung der Fachgruppe Geschichte der Chemie, und des Fachverbands Geschichte der Physik, Göttingen 26. March 2009.

“From Lab to Shop. The Functions of the Laboratory in the Twentieth Century,” Workshop “Composition to Commerce” at the Chemical Heritage Foundation, Philadelphia, USA, 12-13 June 2009.

“Regulatory Knowledge,” Invited Lecture at the Conference “The Control of Experts,” ENS / CIRPHLES, Paris, 10 June 2010.

“Regulatory Knowledge and Regulatory Concepts,” Plenary Lecture at the Young Researchers Day in Logic, Philosophy and History of Science, Brussels, 7 September 2010.

“Forschungstechnologien. Transfer und Transformationen im 20. Jhdt.,” Plenary Lecture, Annual Conference of the German Society for the History of Science, Technology, and Medicine, Stuttgart, 24 September 2011.

“On the Limits of Limit Values,” History of Science Society Annual Meeting, Cleveland, USA, 4 November 2011 (Session Science and Regulation in a Contaminated World).

“Limit Values and the Boundaries of Science and Technology,” at the “Colloque sur Histoire de la Chimie,” Académie des Sciences, Paris, 19 January 2012.

“Limits for the Laboratory,” Workshop, Max Planck Institute for the History of Science, Berlin, 16 March 2012.

“The Chemist’s Nose. Toward a History of Smell, 20th Century,” Princeton University, History of Science Colloquium, 4 October 2012.

“The Materiality of Smell,” Conference “Between Material Substances and Abstract Ideas: Chemists’ Objects of Inquiry, 18th-21st centuries,” at the Chemical Heritage Foundation, Philadelphia, 6 October 2012.

“Transfer and Transformation of Chemical Research Methods in the Twentieth Century,” Talk at the Tokyo Institute of Technology, 19 February 2013.

“Methodentransfer zwischen Physik und Chemie im 20. Jahrhundert,” Annual Meeting of the German Physical Society, Jena, 27 February 2013.

“Vertrauen durch Nichtwissen? Grenzziehungen der Regulierung,” at the Workshop *Taming MICE with Knowledge-based Trust Regimes*, TU Munich, 31 January 2014.

“Physical Methods in the Twentieth Century between Disciplines and Cultures,” CESIMA Anno XX, Sao Paulo, 26. August 2014.

“Physical Methods in the Twentieth Century between Disciplines and Cultures,” International Workshop on the History of Chemistry, *Transformation of Chemistry from the 1920s to the 1960s*, 2-4 March 2015, Tokyo Institute of Technology, Tokyo.

“Chemie und Gesellschaft in den USA. Das Beispiel der Chemical Heritage Foundation,” Wissenschaftsforum Chemie, Tagung Fachgruppe Geschichte der Chemie, Dresden 31. August 2015.

“The Development of Research Methods as the Driving Force of Technoscience,” *TechnoScienceSociety: Technological Reconfigurations of Science and Society*, Sociology of the Sciences Yearbook Meeting, Munich Center for Technology in Society, Technical University Munich, 23-25. November 2015.