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PUBLICATIONS

Hirsch index: 35 (Web of Science Core Collection) as of May 2020, search “jentoft f* or jentoft pc or (lange f and gates bc) or (lange f and knoizinger h)”

1. Edited books

1. "Advances in Catalysis", Volume 58, F.C. Jentoft, Editor; Academic Press (Elsevier), Amsterdam, 2015.
2. "Advances in Catalysis", Volume 57, F.C. Jentoft, Editor; Academic Press (Elsevier), Amsterdam, 2014.
3. "Advances in Catalysis", Volume 56, B.C. Gates and F.C. Jentoft, editors; Academic Press (Elsevier), Amsterdam, 2013.
4. "Advances in Catalysis", Volume 55, B.C. Gates and F.C. Jentoft, editors; Academic Press (Elsevier), Amsterdam, 2012.
5. "Advances in Catalysis", Volume 54, B.C. Gates and H. Knözinger, editors; F.C. Jentoft, Associate Editor, Academic Press (Elsevier), Amsterdam, 2011.
6. "Advances in Catalysis", Volume 53, B.C. Gates and H. Knözinger, editors; F.C. Jentoft, Associate Editor, Academic Press (Elsevier), Amsterdam, 2010.
7. "Advances in Catalysis", Volume 52, B.C. Gates and H. Knözinger, editors; F.C. Jentoft, Associate Editor, Academic Press (Elsevier), Amsterdam, 2009.

2. Edited journal issues

1. Topics in Catalysis, 60, 19–20 (2017) 1483–1753. Special Issue “Catalyst Characterization by Vibrational Spectroscopy” in memoriam of Helmut Knözinger
Guest Editors: *F.C. Jentoft and G. Mestl*
Editors-in-Chief: H.-J. Freund and G.A. Somorjai.
2. Topics in Catalysis 54, 5–7 (2011) 287-457. Festschrift entitled “Concepts in Catalysis Research”, on the occasion of the 70th birthday of Bruce C. Gates
Guest Editors: *F.C. Jentoft and H. Knözinger*
Editors-in-Chief: N. Kruse and G.A. Somorjai.

3. Book chapters and contributions (upon invitation)

1. Solid Acids and Bases, *F.C. Jentoft*, in Comprehensive Inorganic Chemistry II Vol. 7, Eds. Jan Reedijk and Kenneth R. Poepelmeier, Oxford: Elsevier, Amsterdam, 2013, pp. 205–230.
2. Electronic Spectroscopy: Ultraviolet-Visible and Near-IR Spectroscopy, *F.C. Jentoft*, Characterization of Solid Materials and Heterogeneous Catalysts: From Structure to Surface Reactivity, Eds. M. Che, J.C. Védrine, Wiley-VCH, Weinheim, Germany, 2012, pp. 89–147.
3. UV–vis–NIR Spectroscopy in Catalysis: Theory, Experiment, Analysis and Application under Reactive Conditions, *F.C. Jentoft*, Advances in Catalysis 52 (2009) 129–211.
4. Oxo-Anion Modified Oxides, *F.C. Jentoft*, Handbook of Heterogeneous Catalysis, Vol. I, Eds. G. Ertl, H. Knözinger, F. Schüth, J. Weitkamp, 2nd edition, Wiley-VCH, Weinheim, Germany, 2008, pp. 262–278.

- 13 Keywords: Carbocation, DeNO_x-Reaction, Dowex, Isoelectric Point, Isomerization Catalysts, Micropores, Microporous Solids, Photoinduced Oxidation/Reduction of Water, Probe Molecules, Silica, Solid Acid Catalysis, Solid Base Catalysis, Sulfuric Acid Synthesis, *F.C. Jentoft*, “Catalysis from A to Z - A Concise Encyclopedia”, Eds. B. Cornils, W.A. Herrmann, R. Schlögl, C.-H. Wong, Wiley-VCH, Weinheim, Germany, 2000.
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4. Articles in archival journals (with peer review)

- Experimental and DFT calculated IR spectra of guests in zeolites: acyclic olefins and host-guest interactions, *B. Manookian*, *E.D. Hernandez*, *M.D. Baer*, *C.J. Mundy*, *F.C. Jentoft*, *S.M. Auerbach*, *Journal of Physical Chemistry C*, in press Feb. 2020. <https://dx.doi.org/10.1021/acs.jpcc.0c01225>.
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84. An HREM study of the WO₃/TiO₂ monolayer catalyst system - proposals for the overlayer structure, A. Burrows, C.J. Kiehl, R.W. Joyner, H. Knözinger, F. Lange, *Catalysis Letters* **39** (1996) 219–231.

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86. Mechanically activated MoO₃: In-situ characterization of physical mixtures with Al₂O₃, *G. Mestl, N.F.D. Verbruggen, F.C. Lange, B. Tesche, H. Knözinger*, Langmuir **12** (1996) 1817–1829.
87. Propane conversion catalyzed by sulfated zirconia, iron- and manganese-promoted sulfated zirconia, and USY zeolite, *T.-K. Cheung, F.C. Lange, B.C. Gates*, Journal of Catalysis **159** (1996) 99–106.
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89. Propane conversion in the presence of iron- and manganese-promoted sulfated zirconia: evidence of olah superacid chemistry, *T.-K. Cheung, F.C. Lange, B.C. Gates*, Catalysis Letters **34** (1995) 351–358.
90. Neopentane cracking catalyzed by iron- and manganese-promoted sulfated zirconia, *T.-K. Cheung, J.L. d'Itri, F.C. Lange, B.C. Gates*, Catalysis Letters **31** (1995) 153–163.
91. Characterization of mixed copper-manganese oxides supported on titania catalysts for selective oxidation of ammonia, *A. Wöllner, F. Lange, H. Schmelz, H. Knözinger*, Applied Catalysis A **94** (1993) 181–203.
92. Low temperature infrared study of carbon monoxide adsorption on sulfated titania, *F. Lange, K. Hadjiivanov, H. Schmelz, H. Knözinger*, Catalysis Letters **16** (1992) 97–107.
93. An X-ray photoelectron spectroscopy study of oxides of arsenic supported on titania, *F. Lange, H. Schmelz, H. Knözinger*, Journal of Electron Spectroscopy and Related Phenomena **57** (1991) 307–315.

5. Proceedings articles with peer review

94. IR extinction coefficients as a criterion for chemical activation upon adsorption: propene interaction with cationic forms of Y zeolite, *I.R. Subbotina, V.B. Kazansky, F.C. Jentoft, R. Schlögl*, Zeolites and Related Materials: Trends, Targets and Challenges, Proceedings of 4th International FEZA Conference, Eds. A. Gedeon, P. Massiani and F. Babboneau, Studies in Surface Science and Catalysis **174B** (2008) 849–852.
95. Nature of corona in TiO₂@SBA-15 mesoporous nanocomposite, *S. Perathoner, P. Lanzafame, G. Centi, F.C. Jentoft, Tz.V. Venkov, R. Schlögl*, Proceedings of the 15th International Zeolite Conference “From Zeolites to Porous MOF Materials – the 40th Anniversary of International Zeolite Conference”, Studies in Surface Science and Catalysis **170 B** (2007) 1788–1795.
96. The structure of thin zirconia films obtained by self-assembled monolayer mediated deposition: TEM and HREM study, *V.V. Roddatis, D.S. Su, E. Beckmann, F.C. Jentoft, U. Braun, J. Kröhnert, R. Schlögl*, Surface and Coating Technology **151–152** (2002) 63–66.
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98. Nanocrystalline thin films as a model system for sulfated zirconia, *F.C. Jentoft, A. Fischer, G. Weinberg, U. Wild, R. Schlögl*, Proceedings of the 12th International Congress on Catalysis, Granada, Spain, July 9–14, 2000, Studies in Surface Science and Catalysis **130** (2000) 209–214.
99. Microstructural studies of the WO₃/TiO₂ monolayer catalyst system using high resolution electron microscopy, *A. Burrows, C.J. Kiehl, R.W. Joyner, H. Knözinger, F. Lange*, Proceedings of the Materials Research Society **334** (1994) 33–38.
100. A structural study of the WO₃/TiO₂ (Anatase) monolayer catalyst using high resolution electron microscopy, *A. Burrows, R.W. Devenish, R.W. Joyner, C.J. Kiehl, H. Knözinger, F. Lange*, Institute of Physics Conference Series No.138: Section 10 (1993) 481–484.

6. Proceedings articles and technical reports (unreviewed)

101. Decarboxylation of furfural on Pd(111): Ab initio molecular dynamics simulations, *W. Xue, H. Dang, D. Shields, Y. Liu, F. Jentoft, D. Resasco, S. Wang*, Bulletin of the American Physical Society, APS March Meeting 2013 (March 18–22, 2013, Baltimore, MD), Volume 58, Number 1.

102. Adsorption and subsequent surface reactions of bifunctional compounds from bio-oil vapors on oxide supports, *C. Vaddepalli, F.C. Jentoft*, Proceedings of the 2011 AIChE Annual Meeting, Minneapolis, Oct. 16–21, 2011.
103. Preferential oxidation of CO over supported and alloy catalysts in H₂-rich gas for fuel cell application, *D. Teschner, E. Vass, S. Zafeiratos, P. Schnörch, M. Hävecker, A. Knop-Gericke, H. Sauer, J. Kröhnert, F.C. Jentoft, R. Schlögl, G. Hutchings, O. Pozdnyakova-Tellingner, K. Lazar, A. Wootsch*, BESSY Annual Report 2006 (2007) 89–91.
104. Preferential CO oxidation in H₂ (PROX) on Pt/CeO₂ catalyst, high-pressure xps and in-situ DRIFTS study *D. Teschner, E. Vass, S. Zafeiratos, P. Schnörch, M. Hävecker, A. Knop-Gericke, H. Sauer, J. Kröhnert, F.C. Jentoft, R. Schlögl, O. Pozdnyakova, A. Wootsch*, BESSY Annual Report 2005 (2006) 254–256.
105. Deactivation and regeneration of mn-promoted sulfated zirconia alkane isomerization catalysts: An In-situ spectroscopic study, *B.S. Klose, R.E. Jentoft, T. Ressler, P. Joshi, A. Trunschke, R. Schlögl, F.C. Jentoft*, Proceedings of DGMK International Conference: C₄/C₅-Hydrocarbons: Routes to higher value-added products, Munich, Germany, Oct. 13–15, 2004, ISBN 3-936418-23-3, pp. 23–30.
106. In situ spectroscopic study of isomerization of light alkanes over sulfated zirconia catalysts, *X. Yang, R. Ahmad, J. Melsheimer, B. Klose, F.C. Jentoft*, Proceedings of the DGMK-Conference "Chances for Innovative Processes at the Interface between Refining and Petrochemistry", Berlin, Germany, Oct. 9–11, 2002, ISBN 3-931850-98-6, pp. 217–224.
107. Structural and active site characterization of sulfated zirconia catalysts for light alkane isomerization, *M. Standke, C. Breitkopf, H. Papp, S. Wrabetz, B.S. Klose, X. Yang, R.E. Jentoft, F.C. Jentoft, X. Li, L.J. Simon, J.A. Lercher*, Proceedings of the DGMK-Conference "Chances for Innovative Processes at the Interface between Refining and Petrochemistry", Berlin, Germany, Oct. 9–11, 2002, ISBN 3-931850-98-6, pp. 23–30.

7. Submitted articles

Controlled synthesis of high surface area tungsten carbide as hydrogenation catalyst, *P. Bretzler, M. Huber, K. Köhler, R.E. Jentoft, F.C. Jentoft*, submitted to *Applied Catalysis A: General*, Feb. 2020.

8. Other publications

Book reviews

108. In-Situ Spectroscopy in Heterogeneous Catalysis, edited by James F. Haw, *F.C. Jentoft*, *Angewandte Chemie* **115** (2003) 266–267 and *Angewandte Chemie International Edition* **42**,3 (2003) 256–257.

Articles aimed at a general audience

109. Gedanken über das Chemikerdasein (Reflections on being a chemist), *F.C. Jentoft*, in "Schulwege", Jubiläumsbuch des Uhland-Gymnasiums (Collection of articles published as a book on the occasion of the 150th anniversary of the school), Ed. Uhland-Gymnasium Tübingen, 2001, p. 269–276.

Monographs

- ◆ Sulfated Zirconia Alkane Isomerization Catalysts: A Treatise, *F.C. Jentoft*, Habilitationsschrift (Habilitation thesis), Humboldt-Universität zu Berlin, Germany, 2005, pages: 245.
- ◆ Arsenvergiftung von DeNO_x-Katalysatoren (Arsenic poisoning of NO_x catalysts), *F. Lange*, Doctoral Thesis, Ludwig-Maximilians-Universität München, Germany, 1994, pages: 193.
- ◆ Charakterisierung von Modellsystemen zur Arsenvergiftung an DeNO_x-Katalysatoren (Characterization of model systems for the understanding of arsenic poisoning of NO_x catalysts), *F. Lange*, Diplomarbeit (Thesis for degree "Diplom-Chemikerin"), Ludwig-Maximilians-Universität München, Germany, 1990, pages: 114.

INVITED PRESENTATIONS

1. Seminars

1. Spectroscopic observation of surface species and their reactions on solid acid catalysts, Department of Chemical and Biomolecular Engineering, University of Houston, Houston, TX, USA, Nov. 1, 2019.
2. Spectroscopic analysis of acid-catalyzed surface reactions, SABIC Global Corporate Research, Sugar Land, TX, USA, Oct. 31, 2019.
3. Controlling selectivity in aldol reactions via heterogeneous catalysis, Department of Chemical Engineering, University of New Hampshire, Durham, NH, USA, Oct. 18, 2019.
4. Observation of surface species and reactions pathways on solid acids, Seminar of the Department of Inorganic Chemistry, Fritz-Haber-Institut der Max-Planck-Gesellschaft, Berlin-Dahlem, Germany, Sept. 30, 2019.
5. Controlling reaction pathways in heterogeneously catalyzed aldol condensations, International Flavors and Fragrances, Hazlet, NJ, USA, May 17, 2018.
6. Tuning sites, porosity and solvent to steer selectivity in heterogeneously catalyzed aldol reactions, Department of Chemical and Biochemical Engineering, Rutgers University, Piscataway, NJ, USA, Nov. 9, 2017.
7. Spectroscopic analysis of hydrocarbon moieties on solid acid surfaces, ExxonMobil, Annandale, NJ, USA, July 11, 2017.
8. Watching catalysts at work: Hydrocarbon species and reaction pathways on solid acid surfaces, Catalysis Research Center Colloquium, Technical University of Munich, Germany, March 13, 2017.
9. Single phase mixed metal carbides: Synthesis and catalytic properties, Catalysis Seminar, Department of Chemical & Biomolecular Engineering, UC Berkeley, USA, Nov. 18, 2016.
10. Single phase mixed metal carbides and their catalytic properties, School of Engineering & Applied Science, Aston University, Birmingham, UK, March 16, 2016.
11. Tracking hydrocarbon chemistry on surfaces with spectroscopy, UOP LLC – a Honeywell Company, Des Plaines, IL, USA, May 29, 2015.
12. Spectroscopic analysis of hydrocarbon chemistry on surfaces, Department of Chemical and Biomolecular Engineering, Lehigh University, Bethlehem, PA, April 22, 2015.
13. Reactivity of hydrocarbon species on solid acid catalysts, Clariant Produkte (Deutschland) GmbH, Bruckmühl, Germany, Sept. 22, 2014.
14. Hydrodeoxygenation of phenolic compounds in the liquid phase on platinum and palladium catalysts, Catalysis Center for Energy Innovation (An Energy Frontier Research Center funded by the Department of Energy), Webinar Host: University of Delaware, Newark, DE, USA; Speaker Location: Norman, OK, USA, March 25, 2014.
15. Reaction pathways on solid acid surfaces: From understanding to control, Department of Chemical Engineering, University of Massachusetts, Amherst, MA, USA, March 11, 2014.
16. Reactive remnants on catalyst surfaces, Chevron-Phillips Chemical Company, Bartlesville, OK, USA, Feb. 24, 2014.
17. Insight into catalytic hydrocarbon transformations from kinetics and in situ spectroscopy, Center for Catalytic Science and Technology, University of Delaware, Newark, DE, USA, Sept. 20, 2013.
18. Reactions of alkanes and alkenes on solid acid surfaces, Chevron-Phillips Chemical Company, Bartlesville, OK, USA, June 14, 2011.
19. In situ spectroscopic investigations of dispersed metal and bifunctional Catalysts, Umicore AG & Co. KG, Hanau-Wolfgang, Germany, April 14, 2011.

20. Spektroskopische Untersuchungen der Reaktionen von Alkanen und Alkenen an Zeolithen (Spectroscopic investigations of the reactions of alkanes and alkenes on zeolites), Colloquium of the Eduard-Zintl Institute for Inorganic and Physical Chemistry, Technische Universität Darmstadt, Germany, April 13, 2011.
21. Activation and conversion of alkanes and alkenes on acid catalysts, ExxonMobil Research and Engineering Company, Annandale, NJ, USA, June 10, 2010.
22. Hydrocarbon conversion on solid acid catalysts, Oklahoma State University, Stillwater, OK, USA, Feb. 26, 2009.
23. Saure Festkörperkatalysatoren: Neue Materialien und zukünftige Herausforderungen (Solid acid catalysts: New materials and future challenges), TU Bergakademie Freiberg, Germany, Institutskolloquium, Institut für Energieverfahrenstechnik und Chemieingenieurwesen, May 21, 2008.
24. Alkane activation and conversion on solid oxide catalysts, University of Oklahoma, Norman, OK, USA, March 11, 2008.
25. The chemistry of low temperature alkane isomerization catalysts, University of Oklahoma, Norman, OK, USA, June 15, 2007.
26. A fundamental approach to the development of novel alkane isomerization catalysts, Department of Chemistry, University of Reading, UK, June 4, 2007.
27. Sulfated zirconia as a starting point in the quest for new alkane isomerization catalysts, Süd-Chemie AG, Bruckmühl, Germany, Feb. 23, 2007.
28. Modern alkane isomerization catalysts: complex materials for a simple reaction, Laboratory of Industrial Chemistry, Åbo Akademi University Turku, Finland, Nov. 23, 2006.
29. Analyse eines variablen Katalysators: Reaktivität von promotiertem Zirkoniumoxid (Analysis of a variable catalyst: reactivity of promoted zirconia), Fakultät für Chemie und Mineralogie der Universität Leipzig, Germany, Jan. 10, 2006.
30. Reactivity of promoted sulfated zirconia isomerization catalysts, Catalysis Seminar, University of California, Berkeley, CA, USA, Oct. 7, 2005.
31. Isomerisierungskatalysatoren aus sulfatiertem Zirkoniumdioxid: Präparation, Charakterisierung und in situ Untersuchungen (Sulfated zirconia isomerization catalysts: Preparation, characterization and in situ investigations), Institutskolloquium Technische Chemie, Technische Universität Darmstadt, Germany, May 3, 2005.
32. Role of cationic promoters in sulfated zirconia catalysts for *n*-butane isomerization, Seminar of the Department of Chemical and Petroleum Engineering, University of Pittsburgh, Pittsburgh, PA, USA, April 25, 2005.
33. Manganese and iron as promoters of sulfated zirconia isomerization catalysts, Seminar at UOP LLC, Des Plaines, IL, USA, April 22, 2005.
34. Aufklärung der Wirkungsweise von Festkörperkatalysatoren durch Infrarotspektroskopie (Elucidation of solid state catalyst operation using infrared spectroscopy), Technische Universität Berlin, Germany, April 8, 2005.
35. Modifizierte Zirkoniumdioxide – interessante Katalysatoren für die Alkanisomerisierung (Modified zirconias – interesting catalysts for alkane isomerization), Kolloquium des Instituts für Chemie, Humboldt-Universität zu Berlin, Germany, Oct. 20, 2004.
36. Reaktivität von Festkörperkatalysatoren - Beteiligung der "inaktiven" Komponenten ZrO₂ und SiO₂ (Reactivity of solid state catalysts – participation of the "inactive" components ZrO₂ and SiO₂), Fakultät für Mathematik und Naturwissenschaften II, Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany, June 23, 2004.
37. Characterization of surface sites using ir-spectroscopy and microcalorimetry, Laboratoire des Matériaux, Surfaces et Procédés pour la Catalyse, Unité Mixte du CNRS, Ecole Européenne de Chimie, Polymères et Matériaux, Université Louis Pasteur Strasbourg, France, Feb. 18, 2004.

38. Sulfatiertes Zirconiumdioxid als Katalysator für die Skelettisomerisierung von Alkanen (Sulfated zirconia as a catalyst for the skeletal isomerization of alkanes), Kolloquium des Instituts für Technische Chemie, Universität Leipzig, Germany, April 15, 2003.
39. Zirconiumdioxidkatalysatoren für die Alkanisomerisierung (Zirconia catalysts for alkane isomerization), Physikalische Chemie, Universität Bremen, Germany, April 18, 2002.
40. Preparation, activity, and structural stability of promoted sulfated Zirconia, Seminar of Prof. Dr. Roel Prins' group (ETH Zürich), San Bernardino, Switzerland, Feb. 11–14, 2001.
41. Neue Erkenntnisse über Katalysatoren aus sulfatiertem Zirkonoxid (New findings on sulfated zirconia catalysts), Physikalisch-Chemisches Kolloquium, Ludwig-Maximilians-Universität München, Germany, Jan. 12, 2001.
42. Neue Erkenntnisse über Katalysatoren aus sulfatiertem Zirkonoxid (New findings on sulfated zirconia catalysts), Fachinstitut für Physikalische und Theoretische Chemie, Humboldt-Universität zu Berlin, Germany, Oct. 26, 2000.
43. Charakterisierung von Zirkonoxidkatalysatoren (Characterization of zirconia catalysts), Seminar für fortgeschrittene Studenten, Diplomanden und Doktoranden am Anorganisch-Chemischen Institut der Technische Universität München, Germany, May 26, 2000.
44. Präparation dünner Zirkonoxidschichten aus wässrigem Medium (Preparation of thin zirconia films from aqueous medium), Physikalisch-Chemisches Kolloquium der Universität Stuttgart, Germany, Dec. 15, 1998.
45. Sulfatierte Zirkonoxide: Saure Katalysatoren? (Sulfated zirconias – acid catalysts?), Seminar über Experimentelle und Theoretische Aspekte der Oberflächenchemie, AK Prof. Dr. Klaus Christmann, Freie Universität Berlin, Germany, Dec. 2, 1998.
46. Sulfatiertes Zirkonoxid - ein Einblick in Katalyse und Charakterisierung (Sulfated zirconia – insight into catalysis and characterization), Hoechst AG, Frankfurt, Germany, April 1, 1997.
47. Arsenic as a poison for SCR catalysts, Seminar at the Department of Chemical Engineering & Materials Science, University of California at Davis, Davis, CA, USA, May 5, 1995.

2. Invited lectures at conferences and symposia

48. *Keynote Lecture*: Reaction sequences on solid acid surfaces elucidated by in situ spectroscopy, 26th North American Catalysis Society Meeting, Chicago, IL, June 23-28, 2019.
49. Controlling selectivity in aldol reactions by tuning catalyst acid-base properties and porosity, Monthly Meeting of the Catalysis Club of Chicago, Chicago, IL, USA, Nov. 12, 2018.
50. Carbocation chemistry on solid acid catalysts observed by in situ spectroscopy, Operando Spectroscopy for Catalysis Symposium, 256th American Chemical Society National Meeting, Boston, MA, USA, August 19-23, 2018.
51. Spectroscopic observation of reaction sequences on solid acid catalysts, Catalysis Workshop East, Hancock, MA, USA, Aug. 13-17, 2018.
52. *Excellence in Catalysis Award Lecture*: Tracing reaction steps on solid acid catalysts by spectroscopy, Monthly Meeting of The Catalysis Society of Metropolitan New York, Somerset, NJ, USA, May 16, 2018.
53. Regioselectivity and chemoselectivity in heterogeneously catalyzed cross-aldol condensations with unsymmetrical ketones, K. Ponnuru, J.C. Manayil, H.J. Cho, A. Osatiashtiani, W. Fan, K. Wilson, E.C. Jentoft, Catalytic Conversion of Biomass Derived Molecules to Chemicals & Fuels Symposium, 255th American Chemical Society National Meeting and Exposition, New Orleans, LA, USA, March 18-22, 2018.
54. *Keynote Lecture*: Tuning solid catalysts for aldol reactions, 4th International Congress on Catalysis for Biorefineries (CatBIOR), Lyon, France, Dec. 11–15, 2017.
55. Single phase mixed metal carbides: synthesis and catalytic properties, Energy & Fuels Storch Award in Fuel Science: Symposium in honor of Umit S. Ozkan, 254th ACS National Meeting, Washington, DC, USA Aug. 20–24, 2017.

56. *Keynote Lecture*: Spectroscopic observation of hydrocarbon reactions on acid sites, 8th International Symposium on Acid-Base Catalysis, Rio De Janeiro, Brazil, May 7–10, 2017.
57. *Plenary Lecture*: Developing catalytic processes for deoxygenation of biomass-derived feedstocks: vicinal diols to olefins, The 8th Eastern Mediterranean Chemical Engineering Conference, Haifa, Israel, Feb. 26–March 1, 2017.
58. Heterogeneously catalyzed single-step conversion of glycols to olefins, Symposium on Novel Catalysts for Energy and Environmental Issues, Sapporo, Japan, June 30–July 1, 2016.
59. *Keynote Lecture*: Synthesis and catalytic properties of single phase mixed metal carbides, 2016 Annual Symposium of The Catalysis Society of Metropolitan New York, Rutgers University, New Brunswick, NJ, USA, March 23, 2016.
60. Insights into the catalytic chemistry of carbides and zeolites, International Symposium on Inorganic Insights into Catalysis on the Occasion of the 60th Birthday of Robert Schlögl, Fritz-Haber-Institut der Max-Planck-Gesellschaft, Berlin, Germany, July 3–4, 2014.
61. Hydrocarbon species on solid acid catalysts: the good, the bad and the innocent, 2014 Gordon Conference in Catalysis, Colby-Sawyer College, New London, NH, USA, June 22–27, 2014.
62. Short course: IR and UV–vis spectroscopy of solid catalysts in contact with liquids, The 25th Biennial Organic Reactions Catalysis Society Meeting, Tucson, AZ, USA, March 2–6, 2014.
63. Do olefins ru(i)n the show in paraffin isomerization? Northeast Corridor Zeolite Association Meeting, Philadelphia, PA, USA, Dec. 14, 2012.
64. Catching the fish in the hydrocarbon pool, 2011 DOE/BES Catalysis Science Program Meeting "Frontiers in Catalysis at Interfaces and Condensed Media", Annapolis, MD, USA, Oct. 2–5, 2011.
65. Adsorption and conversion of pyrolysis oil compounds, Summer School "Energy and Materials from the Sun", Rolduc Abbey, Kerkrade, The Netherlands, June 20–23, 2011.
66. Kinetic and in situ UV–vis–NIR spectroscopic investigation of *n*-butane isomerization on H-mordenite and Pt/H-mordenite, 17th Rideal Conference, Cardiff, UK, April 19–21, 2011 (Meeting participation by invitation only).
67. Acid and bifunctional catalysts for hydrocarbon activation and conversion, International Symposium "Frontiers in Heterogeneous Catalysis", Catalysis Research Center Munich, Germany, Oct. 22–23, 2010.
68. Stabilization of catalytic alkane isomerization, Annual Spring Meeting of the Southwest Catalysis Society, Houston, TX, USA, March 12, 2010.
69. *Plenary lecture*: Alkane conversion on sulfated zirconia and zeolite catalysts, Second IDECAT Conference on Catalysis: "Concepts, Complexity and Diversity in Catalysis", Porquerolles, France, May 31–June 5, 2008.
70. Zirconium oxide – a variable catalyst component, Microelectronics meets Catalysis: Innovative Oxide Materials, Hanse Wissenschaftskolleg HWK at Delmenhorst, Germany, July 20–21, 2006.
71. Effect of cationic promoters on sulfated zirconia catalysts, Science and Art in Europe: Symposium "Catalysis: Nanotechnology with a Past", Berlin, Germany, May 22–24, 2005.
72. In situ vibrational spectroscopy of reactants and probe molecules on oxide catalysts, CECAM Workshop "In situ atomic scale characterization of surfaces under high pressures: recent advances in experiment and theory", CECAM Lyon, France, Nov. 4–6, 2004.
73. Sulfated zirconia catalysts for alkane isomerization: Recent progress, ExxonMobil European Science & Engineering Program (ESEP), European Award Symposium, Machelen, Belgium, Dec. 4, 2003.
74. Charakterisierung von Festkörperoberflächen mit Hilfe von Sondenmolekülen (Characterization of surfaces of solids with the help of probe molecules), 10. Tagung Festkörperanalytik, Vienna, Austria, July 5–7, 1999.

75. Carl Zerbe Award presentation: Reaktionen kurzketziger Alkane, initiiert durch promotierte sulfatierte Zirkonoxide (Reactions of short-chain alkanes, initiated through promoted sulfated zirconias), Vortragsveranstaltung der DGMK-Bezirksgruppen Mitteldeutschland und Berlin-Brandenburg zur Auswertung des 15. Welterdölkongresses in Peking, Berlin-Adlershof, Germany, Jan. 15, 1998.
76. Solid acid catalyzed alkane cracking mechanisms, 3. G.M. Schwab-Symposium, Catalysis for Organic Synthesis, Berlin, Germany, July 6–10, 1997.

CONTRIBUTED PRESENTATIONS AT CONFERENCES - SUMMARY

Total: 97 oral presentations, 169 poster presentations