

Invited Presentations

1. "Effect of Surface Promoters on Propane Oxidation over Orthorhombic Mo-V-O Catalysts", Rohm&Haas Corporate Research, Spring House, PA, August 24, 2004.
2. "Model Mo-V-Te-O Catalysts for Propane Oxidation to Acrylic Acid: New Fundamental Insights from Studies of Surface Active Sites", USA-Netherlands Catalysis Conference, hosted by the Catalysis Society of Metropolitan New York and the Catalysis Society of Philadelphia, Philadelphia, PA, August 19, 2004.
3. "Ordered MCM-48 membranes Containing Surface-Grafted Amino Groups for CO₂/N₂ Separation", 3rd International Zeolite Membrane Meeting, Breckenridge, CO, July 27, 2004.
4. "Model Mo-V-Te-O Catalysts for Propane Oxidation to Acrylic Acid: New Fundamental Insights from Studies of Surface Active Sites", SABIC Corporate Research, Houston, TX, June 18, 2004.
5. "Model Mo-V-Te-O Catalysts for Propane Oxidation to Acrylic Acid: New Fundamental Insights from Studies of Surface Active Sites", BP Chemical Corporate Research, Naperville, IL, June 8, 2004.
6. "Mixed Mo-V-Te-O Catalysts for Selective Propane Oxidation to Acrylic Acid", Solutia Corporate Research, Pensacola, FL, October 7, 2003.
7. "Model Mo-V-Te-O Catalysts for Propane Oxidation to Acrylic Acid: New Fundamental Insights from Studies of Surface Active Sites", Rohm&Haas Corporate Research, Spring House, PA, September 29, 2003.
8. "Mixed Mo-V-Te-O Catalysts for Selective Propane Oxidation to Acrylic Acid", Engelhard Technical Center, Beachwood, OH, September 26, 2003.
9. "Mixed Mo-V-Te-O Catalysts for Selective Propane Oxidation to Acrylic Acid", Rohm&Haas Corporate Research, Spring House, PA, June 18, 2003.
10. "Mixed Mo-V-Te-O Catalysts for Environmentally Benign Propane Oxidation to Acrylic Acid", The Russian-American Seminar "Advances in the Understanding and Application of Catalysts", Moscow, May 28-30, 2003.
11. "Mesostructured Mixed Metal Oxides for Partial Oxidation of Lower Alkanes", The Russian-American Seminar "Advances in the Understanding and Application of Catalysts", Moscow, May 28-30, 2003.
12. "Mixed Mo-V-Te-O Catalysts for Environmentally Benign Propane Oxidation to Acrylic Acid", Department of Chemical Engineering, University of Kentucky, March 12, 2003.
13. "Mixed Mo-V-Te Oxide Catalysts for Selective Propane Oxidation to Acrylic Acid", The Pittsburgh-Cleveland Catalysis Society, Carnegie-Mellon University, Pittsburgh, December 16, 2002.
14. "Towards Rational Design of Functional Materials for Catalysis, Environmental Science, and Nanotechnology", Department of Chemistry, Kent State University, October 24, 2002.
15. "Clean Coal Technologies: Reliable and Affordable Energy for America's Future", NSF Workshop: Environmentally Benign Process Research Needs, The Berkshires, MA, August 14-16, 2002.

16. "Towards Rational Design of Functional Materials: Applications in Catalysis, Environmental Science, and Nanotechnology", Department of Chemical Engineering, Lehigh University, January 31, 2002.
17. "The Bulk Structure and Catalytic Properties of Mixed Mo-V-Sb-Nb Oxides for Selective Propane Oxidation to Acrylic Acid", Rohm & Haas Research Laboratories, Spring House, PA, August 16, 2001.
18. "Molecular Engineering of New Catalytic Materials: from Bulk to Supported VPO Catalysts for Alkane Oxidation", Department of Chemical Engineering, The Ohio State University, October 19, 2000.
19. "Predicting Locations of Non-Framework Species in Zeolite Materials", Procter and Gamble Research Laboratories, Miami Valley, June 21, 2000.
20. "Molecular Engineering of New Catalytic Materials: from Bulk to Supported VPO Catalysts for Alkane Oxidation", Rohm & Haas Research Laboratories, Spring House, PA, May 16, 2000.
21. "Molecular Engineering of New Catalytic Materials: from Bulk to Supported VPO Catalysts for Alkane Oxidation", Department of Electrical and Computer Engineering, University of Cincinnati, April 12, 2000.
22. "Synthesis of Zeolite Nanoparticles for Laundry Detergent Applications", Procter and Gamble Research Laboratories, Miami Valley, March 25, 2000.
23. "Molecular Engineering of New Catalytic Materials: from Bulk to Supported VPO Catalysts for Alkane Oxidation", Institut für Verfahrenstechnik, ETH-Zürich, March 28, 2000.
24. "Molecular Engineering of New Catalytic Materials: from Bulk to Supported VPO Catalysts for Alkane Oxidation", BP Amoco Chemicals, Naperville, IL, February 16, 2000.
25. "Molecular Engineering of New Catalytic Materials: from Bulk to Supported VPO Catalysts for Alkane Oxidation", Department of Chemistry, University of Michigan, January 28, 2000.
26. "Structure-Reactivity Relationships in Oxidation of C₄ Hydrocarbons on Supported Vanadia Catalysts", Department of Chemical Engineering, Michigan State University, January 27, 2000.
27. "Molecular Engineering of New Catalytic Materials: from Bulk to Supported VPO Catalysts for Alkane Oxidation", Department of Chemical Engineering, The Tri-State Catalysis Society Meeting, October 20, 1999.
28. "Locations of Nonframework Species in Zeolitic Adsorbents and Catalysts: Experiment and Simulation", Zettlemoyer Center for Surface Studies, Lehigh University, Bethlehem, PA, December 3, 1997.
29. "Structure-Activity Relationships in Oxidation of *n*-Butane on VPO Catalysts: Discovery of New Family of Catalytic Layered Vanadyl(IV) Phosphates", School of Chemical Engineering, Georgia Institute of Technology, Atlanta, May 20, 1997.
30. "Structure-Property Relationships in Oxidation of *n*-Butane on VPO Catalysts and Shape Selective Zeolitic Catalysts for *p*-Xylene Formation", School of Chemical Engineering, Purdue University, West Lafayette, IN, April 9, 1997.
31. "*In Situ* Raman Spectroscopic Study of Bulk and Surface Metal Oxides in Hydrocarbon Oxidation", 5th European Workshop Meeting on Selective Catalytic Oxidation, Berlin, Germany, November 6-7, 1995.

32. "Mechanism of Oxidation of *n*-Butane on the Vanadyl Pyrophosphate Catalysts, Zettlemoyer Center for Surface Studies", Lehigh University, Bethlehem, PA, April 19, 1995.
33. "The Effect of the Phase Composition of Model V-P-O Catalysts for Partial Oxidation of *n*-Butane", Mobil Corporation, Paulsboro, NJ, February 17, 1995.
34. "*In Situ* Raman Spectroscopic Study of the VPO Catalysts for *n*-Butane Oxidation and the Nature of the Active Phase", W.R. Grace Inc, Columbia, MD, February 12, 1995.
35. "New Synthesis Approaches to Vanadium-Phosphorus-Oxide System", BOC Group, Murray Hills, NJ, February 2, 1995.
36. "Evolution of Active Surface of Vanadyl Pyrophosphate and Mechanism of Partial Oxidation of *n*-Butane to Maleic Anhydride", Zettlemoyer Center for Surface Studies, Lehigh University, Bethlehem, PA, December 16, 1994.
37. "On the Nature of Selective Oxidation of Hydrocarbons on VPO Catalysts", ABB Lummus Crest Inc., Bloomfield, NJ, November 29, 1994.