

William Barry Jensen, McMicken Professor Department of Chemistry, University of Cincinnati

Vita Revised: 30 June 2012

Birth Date: 25 March 1948

Birthplace: Marshfield, WI

EDUCATION

1. B.S. Chemistry (Honors), University of Wisconsin, Madison, WI, 1970.
2. M.S. (Chemistry and Education), University of Wisconsin, Madison, WI, 1972. Thesis Title: *The Secondary Chemistry Textbook and the History of Secondary Chemistry Teaching: 1820-1960.*
3. Ph.D. (Inorganic Chemistry), University of Wisconsin, Madison, WI, 1982. Thesis Title: *Investigations of the Quaternary $M / MCl_4 / X_8 / Al_2Cl_6$ Systems (where $M = Zr, Ti$, and $X_8 = S_8, Se_8$) and Related Melts.*

WORK EXPERIENCE

1. Laboratory Technician, Brokaw Paper Mills, Brokaw, WI, 9/67-12/67.
2. High School Chemistry Teacher, Public School System, Cottage Grove, MN, 9/71-12/71.
3. Teaching Assistant, University of Wisconsin, Madison, WI, 9/70-12/79.
4. Research Assistant, University of Wisconsin, Madison, WI, 1/80-8/81.
5. Chemical Consulting Work (Adhesion), Seals Eastern, Red Bank, NJ, 1981- 2000.
6. Lecturer, Department of Chemistry, University of Wisconsin, Madison, WI, 6/82-8/83.

7. Assistant Professor of Chemistry, Rochester Institute of Technology, Rochester, NY, 9/83-6/86.
8. Chemical Consulting Work (Legal), R. Maurice Associates, Inc., Rochester, NY, 1985-1987.
9. Assistant Professor of Chemistry, Oesper Position in Chemical Education and the History of Chemistry, University of Cincinnati, Cincinnati, OH, 9/86-9/89.
10. Associate Professor of Chemistry, University of Cincinnati, Cincinnati, OH, 9/89-9/91.
11. Chemical Consulting Work (Water Treatment), Texco Corporation, Cincinnati, OH, 3/90.
12. Oesper Professor of Chemistry, University of Cincinnati, Cincinnati, OH, 9/91- 12/11.
13. McMicken Professor and Curator, Oesper Collections, University of Cincinnati, Cincinnati, OH. 3/12 to present.
14. Chemical Consulting Work (Adhesion), Federal Mogul Corporation, Ann Arbor, MI, 2/99.

HONORS, PROFESSIONAL ACTIVITIES AND SOCIETIES

1. American Legion Scholarship, 1966.
2. Petersdorf Scholastic Scholarship, 1967.
3. University of Wisconsin Center-System Award in Journalism, 1966-1967.
4. Phi Eta Sigma Honorary Scholastic Fraternity, 1967.
5. Helfear Chemistry Scholarship, University of Wisconsin, 1969-1970.
6. Phi Lambda Upsilon Honorary Chemical Society, 1970.
7. Sigma Xi Research Society, 1981.

8. Editor of the *HIST Newsletter*, History of Chemistry National Division, American Chemical Society, 1985-1987.
9. Member of American Chemical Society Speakers Bureau, 1986-present.
10. Secretary-Treasurer, History of Chemistry National Division, American Chemical Society, 1986-1989.
11. Member of the American Chemical Society Ad Hoc Committee on the Periodic Table, 1987.
12. Editor of the *CINTACS Newsletter*, Cincinnati Section of the American Chemical Society, 1987-1990.
13. Historian for the Cincinnati Section of the American Chemical Society, 1987-2000.
14. Invited Member of IUPAC/CTC-UNESCO International Data Base on Expertise in Chemical Education, 1988.
15. Member of the History Committee, Department of Engineering, University of Cincinnati, 1988-1990.
16. Member of Bicentennial Display Committee, Cincinnati Section of the ACS, 1988.
17. Invited Member of the Reactivity Network Project for Chemical Education, 1988.
18. Member of the Planning Committee for the 1988 National Meeting of the History of Science Society.
19. Editor of the *CHEMICAL BOND Newsletter*, 1988-1994.
20. Founding editor of the *Bulletin for the History of Chemistry*, 1988-1995.
21. Member of the Holmes Education Committee, University of Cincinnati, 1990.
22. Member of the Evaluation Committee for Research Challenge Proposals, University of Cincinnati, 1990.

23. Member of the Program Committee, Division of Chemical Education, American Chemical Society, 1990.
24. Chair-Elect, History of Chemistry, National Division, American Chemical Society, 1990.
25. Chair, History of Chemistry, National Division, American Chemical Society, 1991.
26. Member of the ACS Advisory Committee for The National Historic Chemical Landmarks Program, 1992-1995.
27. Member of the Editorial Board, ACS History of Modern Chemical Sciences Series, 1992-1995.
28. Coordinating Editor, *Foundations of Chemistry*, 1998-2000.
29. Member Museum Committee, Cincinnati Observatory, 2001-2002.
30. Recipient of the 2005 Edelstein Award for Outstanding Achievement in the History of Chemistry. An international award presented by the Division of the History of Chemistry of the American Chemical Society.
31. Member of Edelstein Awards Committee, History of Chemistry Division, American Chemical Society, 2006-2008.

RESEARCH EXPERIENCE

Research experience has been largely in the field of classical inorganic chemistry, with emphasis on inorganic energetics, crystal chemistry, and the Lewis acid-base aspects of nonaqueous and molten-salt solvent systems. Ph.D. work centered on the synthesis of nonmolecular halides, chalcides, and pnictides of the early d-block elements using coupled transport reactions in highly acidic aluminum halide melts. Current interests include concept innovation in chemical education, empirical sorting-map correlations, applications of the Lewis acid-base concepts, crystal chemistry, qualitative bonding models, the history of 19th- and early 20th-century inorganic and physical chemistry, the history of chemical education, and the origins of the Cincinnati Chemical Community.

PRESENTED PAPERS, INVITED LECTURES AND SEMINARS

National and International

1. “Lewis Acid-Base Interactions and Adhesion Theory,” Invited Paper, Symposium on Elastomers, 119th National Meeting of the Rubber Division, ACS, Minneapolis, MN, 02-05 June 1981.
2. “Abegg, Lewis, Langmuir and the Octet Rule,” Invited Paper, Symposium on Gilbert Newton Lewis, Division of Chemical Education, 183rd National ACS Meeting, Las Vegas, NV, 28 March - 02 April 1982.
3. “Illustration and the Secondary Chemistry Text: 1820-1970,” Invited Paper, Symposium on the Art and Craft of Scientific Illustration, Division of Chemical Education, 183rd National ACS Meeting, Las Vegas, NV, 28 March - 2 April 1982.
4. “Crystal Coordination Formulas and the Teaching of Solid-State Inorganic Chemistry,” 8th Biennial Conference on Chemical Education, University of Connecticut, Storrs, CT, 05-10 August 1984.
5. “Communicating Solid-State Structures to the Uninitiated,” Invited Tutorial, Symposium on Structural Principles for Solids, Division of Inorganic Chemistry, 188th National ACS Meeting, Philadelphia, PA, 26-31 August 1984.
6. “Lewis Acid-Base Aspects of Liquid-Liquid Miscibility,” Invited Paper, Symposium on Migration of Gases, Liquids, and Solids in Elastomers, 126th National Meeting of the Rubber Division, ACS, Denver, CO, 23-26 October 1984.
7. “Lewis Acid-Base Aspects of Liquid-Liquid Solubility,” Invited Seminar, American Cyanamid Research Laboratories, Stamford, CT, 30 October 1984.
8. “The Relevance of Lewis Acid-Base Chemistry to Surface Interactions,” Invited Paper, Symposium on Surface and Colloid Science in Computer Technology, 5th International Conference on Surface and Colloid Science, Clarkson University, Potsdam, NY, 24-25 June 1985.

9. "The Development of Blowpipe Analysis," Symposium on the History and Preservation of Chemical Instrumentation, History of Chemistry Division, 190th National ACS Meeting, Chicago, IL, 08-13 September 1985.
10. "Labeling the Periodic Table: As Simple as ABC," Symposium on Pedagogy and the Periodic Table, Chemical Education Division, 192nd National ACS, Anaheim, CA, 07-12 September 1986.
11. "August Horstmann and the Origins of Chemical Thermodynamics," Symposium on the History of Physical Chemistry, History of Chemistry Division, 193rd National Meeting ACS, Denver, CO, 05-10 April 1987.
12. "Blowpipe Analysis Reconsidered," Division of Chemical Education, 194th National ACS Meeting, New Orleans, LA, 30 August - 04 September 1987.
13. "Dial-A-Chemist: Bizarre Mechanical Devices for Teaching Chemistry," Division of the History of Chemistry, 194th National ACS Meeting, New Orleans, LA, 30 August - 04 September 1987.
14. Chair, General Papers, Section B, Division of Chemical Education, 194th National ACS Meeting, New Orleans, LA, 30 August - 04 September 1987.
15. "Frank Wigglesworth Clarke's 1880 Report on the Teaching of Chemistry and Physics in the United States," Division of the History of Chemistry, 195th National ACS Meeting, Toronto, Canada, 05-11 June 1988.
16. "Spectroelectrochemistry: An Anecdotal History of the Early Years," Symposium on the History of Electrochemistry, Division of the History of Chemistry, 195th National ACS Meeting, Toronto, Canada, 05-11 June 1988. (With William R. Heineman).
17. Chair, two sessions of the Symposium on the History of Electrochemistry, Division of the History of Chemistry, 195th National ACS Meeting, Toronto, Canada, 05-11 June 1988.
18. Chair, Session on International Agreements/Disagreements on the Periodic Table, 10th Biennial Conference on Chemical Education, Purdue University, West Lafayette, IN, 31 July - 04 August 1988.

19. Chair, Session on History of Chemistry, 10th Biennial Conference on Chemical Education, Purdue University, West Lafayette, IN, 31 July 31 - 04 August 1988.
20. "Is it Possible for an Inorganic Chemist to do a Planned Synthesis?," Symposium on Undergraduate Inorganic Laboratory, 10th Biennial Conference on Chemical Education, Purdue University, West Lafayette, IN, 31 July - 04 August 1988.
21. "Defending the Purity of the Revolution: Thomas Duche Mitchell's Defense and Critique of Lavoisier," Symposium on the Bicentennial of the Chemical Revolution, Division of the History of Chemistry, 197th National ACS Meeting, Dallas, TX, 09-14 April 1989.
22. "Chemical Demonstrations B.A. (Before Alyea)," Symposium in Honor of Hubert Alyea, Division of Chemical Education, 197th National ACS Meeting, Dallas, TX, 09-14 April 1989.
23. "Mers, Isms and Morphs: Unraveling the Tangled Vocabulary of Chemical Composition and Structure," Symposium in Honor of O. T. Benfey, 41st Southeastern Regional ACS Meeting, Winston-Salem, NC, 09-11 October 1989.
24. "History of Chemistry and the Chemical Community: Bridging the Gap," Symposium on Chemical Sciences and the Modern World, Beckman Center for the History of Chemistry, Philadelphia, PA, 18-20 May 1990.
25. "The Lewis Acid-Base Concepts: Recent Results and Prospects for the Future," Invited Overview Lecture, Symposium in Honor of Fred Fowkes, 64th Colloid and Surface Science Symposium, Lehigh University, Bethlehem, PA, 18-20 June 1990.
26. Chair, General Papers, Division of the History of Chemistry, 200th National ACS Meeting, Washington, DC, 26-31 August 1990.
27. "The History of the Chemistry Set," Symposium on the History of the Chemistry Set, 11th Biennial Conference on Chemical Education, Georgia Institute of Technology, Atlanta, GA, 05-19 August 1990.
28. "Michael Faraday and the Art and Science of Chemical Manipulation," Symposium on Michael Faraday: Chemist and Popular Lecturer, Division of the History of Chemistry, 201st National ACS Meeting, Atlanta, GA, 14-19 April 1991.

29. Chair of Third Session of the Symposium on "Michael Faraday: Chemist and Popular Lecturer," Division of the History of Chemistry, 201st National ACS Meeting, Atlanta, GA, 14-19 April 1991.
30. "Michael Faraday and the Art and Science of Chemical Manipulation," 23rd Central-Great Lakes Regional ACS Meeting, Indianapolis, IN, 29-31 May 1991.
31. "The Historical Development of the Periodic Table and the Structure of the Atom," A series of ten invited lectures, History of Chemistry Workshop, Beckman Center for the History of Chemistry, Philadelphia, PA, 22-26 July 1991.
32. "Captain Nemo's Battery: Chemistry and the Science Fiction of Jules Verne," 203rd National ACS Meeting, San Francisco, CA, 05-10 April 1992.
33. "The Chemistry of Bug-Eyed Silicon Monsters," 203rd National ACS Meeting, San Francisco, CA, 05-10 April 1992.
34. "From Triads to Aufbau," a series of 12 invited lectures on the history of the periodic law, 1992 Woodrow Wilson Institute on the History of Chemistry, Princeton University, Princeton, NJ, 13-17 July and 27-31 July 1992.
35. "To Demonstrate the Truths of Chymistry: 300 Years of Chemical Demonstrations," Invited Lecture, Conference on Chemical Education, Butler University, Indianapolis, IN, 03 August 1993.
36. "A. W. Hofmann and the Hofmann Electrolysis Apparatus," Conference on Chemical Education, Butler University, Indianapolis, IN, 03 August 1993.
37. "Two Centuries of the Chemistry Set," Invited Lecture, Symposium on the History of Chemistry, Sacred Heart University, Fairfield, CT, 30 October 1993.
38. "Joseph Priestley and the 18th-Century Revolution in Chemical Apparatus," 13th Biennial Conference on Chemical Education, Bucknell University, Lewisburg, PA, 31 July - 04 August 1994.

39. "The Historical Development of the van Arkel Bond-Type Triangle," 13th Biennial Conference on Chemical Education, Bucknell University, Lewisburg, PA, 31 July - 04 August 1994.
40. "Electronegativity from Berzelius to Pauling," 208th National ACS Meeting, Washington, DC, 21-26 August 1994.
41. "From the Pneumatic Trough to the PC: Apparatus Innovation and the History of Chemistry," Invited Lecture, 2nd Symposium on the History of Chemistry, Sacred Heart University, Fairfield, CT, 05 November 1994.
42. "Logic, History, and the Teaching of Chemistry," a series of three invited lectures, 50th Summer Conference, New England Association of Chemistry Teachers, Sacred Heart University, Fairfield, CT, 15-17 August 1995.
43. "Does Chemistry Have a Logical Structure?," Invited Lecture, 211st National ACS Meeting, San Francisco CA, 16 April 1997.
44. "A Natural History Approach to Descriptive Chemistry," Invited Lecture, 211st National ACS Meeting, San Francisco CA, 15 April 1997.
45. "Frank Wigglesworth Clarke's 1880 Report on Chemical Education in the United States," Invited Lecture, 4th Symposium on the History of Chemistry, Sacred Heart University, Fairfield, CT, 01 November 1997.
46. "To Demonstrate the Truths of Chymistry: Three Centuries of Chemical Demonstrations," Invited Lecture, 214 National ACS Meeting, Boston, MA, 25 August 1998.
47. "A Contracted History of the Lanthanide Contraction," Invited Lecture, 5th Symposium on the History of Chemistry, Sacred Heart University, Fairfield, CT, 07 November 1998.
48. "Bond-Type Triangles: An Overview," Invited Paper, 82nd Canadian Society for Chemistry Conference, Toronto, Canada, 30 May-02 June 1999.
49. "From the Pneumatic Trough to the PC: Apparatus Innovation and the History of Chemistry," Guest Speaker, SmithKline Beecham Symposium on Pharmaceutical Chemistry, Hershey, PA, 11 October, 1999.

50. "Everything But the Kitchen Sink: Four Centuries of Chemistry Textbooks," Invited Lecture, 16th Biennial Conference on Chemical Education, University of Michigan, Ann Arbor, MI, 11 June 2000.
51. "The Quest for Noble-Gas Compounds: 1894-1962," Invited Paper, 35th Midwestern Regional ACS Meeting, St. Louis, MO, 25-28 October 2000.
53. "The Quest for Noble-Gas Compounds: 1894-1962," Invited Lecture, 6th History of Chemistry Symposium, Sacred Heart University, Fairfield, CT, 11 November, 2000.
54. "Electronegativity from Avogadro to Pauling: II. Late 19th and Early 20th Century Developments," Invited Paper, 222nd National ACS Meeting, Chicago, IL, 26-30 August, 2001.
55. "Fin de Siècle Chemistry: Chemistry at the Turn of The Century, 1400-2000," Plenary Lecture, 49th Annual MACTLAC Meeting, University of St. Thomas, St. Paul, MN, 26 October, 2001.
56. "From the Pneumatic Trough to the PC: Apparatus Innovation and the History of Chemistry," History of Chemistry Series, Texas A & M University, College Station, TX, 26 March 2002.
57. "History of Chemistry Resources at the University of Cincinnati," Invited Paper, 223rd National ACS Meeting, Orlando FL, 07-11 April 2002.
58. "An Illustrated Guide to the Oesper Collections in the History of Chemistry," Chemical Heritage Foundation, Philadelphia, PA, 25 March 2004.
59. "Priestley's Chemical Apparatus," Invited paper, 228th National ACS Meeting, Philadelphia, PA, 24 August 2004.
60. "Priestley's Chemical Apparatus," Dinner Speaker, Chemical Heritage Foundation, Philadelphia, PA, 21 October, 2004.
61. "The Quantification of 20th-Century Thermodynamics: A Tribute to the 1923 Text, *Thermodynamics and the Free-Energy of Chemical Substances* by Gilbert Newton Lewis

- and Merle Randall,” Invited Paper, Bolton Society Symposium, 230th National ACS Meeting, Washington, DC. 28 August 2005.
62. “The *Traité* of the Third Chemical Revolution: A Tribute to the 1923 Monograph, *Valence and the Structure of Atoms and Molecules* by Gilbert Newton Lewis,” Invited Paper, Bolton Society Symposium, 230th National ACS Meeting, Washington, DC, 29 August 2005.
 63. “An Illustrated Tour of the Oesper Collections in the History of Chemistry,” Keynote Paper, Edelstein Award Symposium, 230th National ACS Meeting, Washington, DC, 30 August 2005.
 64. “Spectroscopy and the Periodic Table: A Tribute to the 1927 Monograph, *Linienspektren und periodischen System der Elemente* by Friedrich Hund,” Invited Paper, Bolton Society Symposium, 234th National ACS Meeting, Boston, MA, 20 August 2007.
 65. “Four Centuries of Atomic Theory: An Overview,” Invited Paper, Symposium on the History of the Atomic Theory, 236th National ACS Meeting, Philadelphia, PA, 18 August 2008.
 66. “August Horstmann and the Origins of Chemical Thermodynamics,” Invited Paper, Edelstein Symposium, 236th National ACS Meeting, Philadelphia, PA, 19 August 2008.
 67. “Lucretius and Newton: Some Overlooked Parallels,” Invited Paper, Lucretius Symposium, St. John Fischer College, Rochester, NY, 19-20 March, 2009.
 68. “Documenting the History of Chemical Nomenclature and Symbolism,” Invited Paper, Bolton Symposium, 238th National ACS Meeting, Washington, DC, 16 August 2009.
 69. “Physical Chemistry Before Ostwald: The Textbooks of Josiah Parsons Cooke,” Invited Paper, Bolton Symposium, 240th National ACS Meeting, Washington, DC, 23 August 2010.
 70. “Inorganic Myths in the Freshman Textbook,” Invited Paper, Symposium on Myths of a Chemical Nature, 240th National ACS Meeting, Washington, DC, 26 August 2010.

71. "The Free-Electron Model: From Otto Schmidt to John Platt," Invited Paper, Symposium on Pioneers of Quantum Chemistry" 241st National ACS Meeting, Anaheim, CA, 28 March 2011.
72. "Robert Bunsen's Sweet Tooth: Bunseniana in the Oesper Collections." Invited Paper, Symposium on "Characters in Chemistry: A Celebration of the Humanity of Chemistry," 244th National ACS Meeting. Philadelphia, PA, 21 August 2012.

Regional and Local

1. "Abegg, Lewis, Langmuir and the Octet Rule," Invited Seminar, SUNY-Brockport, Brockport, NY, 12 February 1985.
2. "Models and Molecules: New Ways of Describing Molecular Structure," A Series of Lectures for Area High School Chemistry Teachers, Rochester Institute of Technology, Rochester, NY, 03 April - 01 May 1985.
3. "The Contributions of Solid-State Chemistry to Chemical Theory," Keynote Address, 30th Annual American Chemical Society Undergraduate Research Symposium, Rochester Institute of Technology, Rochester, NY, 20 April 1985.
4. "Origins of the Octet Rule," Invited Seminar, St. John Fisher College, Rochester, NY, 19 October 1985.
5. "Famous Chemists in Caricature and Anecdote," Keynote Address, Rochester Area High School Chemistry Award Banquet, Rochester, NY, 14 November 1985.
6. "Famous Chemists in Caricature and Anecdote," Invited Speaker, Undergraduate Science Lecture Series, Roberts Wesleyan College, Chili, NY, 15 November 1985.
7. "Origins of the Octet Rule," University of Cincinnati, Cincinnati, OH, 24 January 1986.
8. "Communicating Solid-State Structures to the Uninitiated," Invited Seminar, Union College, Schenectady, NY, 14 February 1986.

9. "Famous Chemists in Caricature and Anecdote," Invited Seminar, SUNY-Potsdam, Potsdam, NY, 15 April 1986.
10. "Famous Chemists in Caricature and Anecdote," Invited Seminar, St. Lawrence University, Canton, NY, 15 April 1986.
11. "Crystal Coordination Formulas and the Teaching of Inorganic Chemistry," University of Cincinnati, Cincinnati, OH, 04 November 1986.
12. "Chemistry at the University of Cincinnati: The First 50 Years-Part I," University of Cincinnati, Cincinnati, OH, 17 April 1987.
13. "Chemistry at the University of Cincinnati: The First 50 Years-Part II," University of Cincinnati, Cincinnati, OH, 15 May 1987.
14. "Famous Chemists in Caricature and Anecdote," Keynote Speaker, Awards Dinner, Rush-Henrietta Central School District High-School Science Teachers, Rochester, NY, 11 June 1987.
15. "Famous Chemists in Caricature and Anecdote," Invited Seminar, University of Missouri, St. Louis, MO, 25 August 1987.
16. "August Horstmann and the Origins of Chemical Thermodynamics," Invited Seminar, University of New Hampshire, Durham, NH, 08 October 1987.
17. "Famous Chemists in Caricature and Anecdote," Keynote Speaker, 75 Anniversary of the Rochester Section of the American Chemical Society, Rochester, NY, 10 November 1987.
18. "Famous Chemists in Caricature and Anecdote," Invited Seminar, University of Tennessee, Chattanooga, TN, 20 November 1987.
19. "Does Ontogeny Recapitulate Phylogeny in Education? Some Depressing Thoughts on Chemical Education and the History of Chemistry, University of Cincinnati, Cincinnati, OH, 05 February 1988.

20. "The Tail Does Not Wag the Dog: Harry Shipley Fry and the Rise and Fall of the U.C. Chemistry Department, 1918-1945," Invited Seminar, University of Cincinnati History Department, Cincinnati, OH, 15 February 1988.
21. "Famous Chemists in Caricature and Anecdote," Invited Seminar, Western Kentucky University, Bowling Green, KY, 19 February 1988.
22. "Chemistry at the University of Cincinnati: The First 50 Years-Part III," University of Cincinnati, Cincinnati, OH, 26 February 1988.
23. "The Synthesis of Reduced-State Halides and Chalcides of Zirconium and Titanium in Molten Aluminum Halide Melts," University of Cincinnati, Cincinnati, OH, 08 March 1988.
24. "Famous Chemists in Caricature and Anecdote" Invited Seminar, Austin Peay State University, Clarksville, TN, 01 April 1988.
25. "Famous Chemists in Caricature and Anecdote," Invited Seminar, Bowling Green State University, Bowling Green, OH, 13 April 1988.
26. "Famous Chemists in Caricature and Anecdote," Invited Seminar, Central Ohio Valley Section of the American Chemical Society, Huntington, WV, 26 April 1988.
27. "Chemistry at the University of Cincinnati: The First 50 Years-Part IV," University of Cincinnati, Cincinnati, OH, 29 April 1988.
28. "The Synthesis of Reduced-State Halides and Chalcides of Zirconium and Titanium in Molten Aluminum Halide Melts," Invited Inorganic Seminar, Purdue University, West Lafayette, IN, 13 September 1988.
29. "Does Ontogeny Recapitulate Phylogeny in Education? Some Depressing Thoughts on Chemical Education and the History of Chemistry," Invited Seminar in Chemical Education, Purdue University, West Lafayette, IN, 14 September 1988.
30. "Famous Chemists in Caricature and Anecdote," University of Tennessee Chattanooga, Chattanooga, TN, 17 February 1989.

30. "Famous Chemists in Caricature and Anecdote," Cumberland College, Williamsburg, KY, 03 March 1989.
31. "Famous Chemists in Caricature and Anecdote," Wabash Section of the ACS, Terre Haute, IN, March 08, 1989.
32. "Communicating Solid-State Structures to the Uninitiated," Indiana State University, Terre Haute, IN, 08 March 1989.
33. "Frank Wigglesworth Clarke's 1880 Report on Chemical Education in the United States," DePauw University, Greencastle, IN, 09 March 1989.
34. "Chemistry at the University of Cincinnati-Part V," University of Cincinnati, Cincinnati, OH, 31 March 1989.
35. "Famous Chemists in Caricature and Anecdote," Wright State University, Dayton, OH, 05 May 1989.
37. "Famous Chemists in Caricature and Anecdote," Berea College, Berea, KY, 08 May 1989.
38. "Chemistry at the University of Cincinnati, Part VI," University of Cincinnati, Cincinnati, OH, 31 May 1989.
39. "Resources for the History of Chemistry," "The Development of Atomic Weight Determinations," "The Development of the Periodic Table," Invited Lecture Series, St. John's University, Collegeville, MN. 12-14 June 1989.
40. "Famous Chemists in Caricature and Anecdote," Keynote Speaker, Minnesota Section of the ACS, Collegeville, MN, 19 September 1989.
41. "Frank Wigglesworth Clarke's 1880 Report on Chemical Education in the United States," Purdue University, West Lafayette, IN, 29 November 1989.
42. "August Horstmann and the Origins of Chemical Thermodynamics," Ohio State University, Columbus, OH, 19 February 1990.

43. "Does Ontogeny Recapitulate Phylogeny in Education? Some Depressing Thoughts on Chemical Education and the History of Chemistry," University of Wisconsin, Madison, WI, 15 March 1990.
44. "Three Centuries of Chemical Demonstrations," Murray State University, Murray, KY, 02 April 1990.
45. "Three Centuries of Chemical Demonstrations," West Virginia State College, Institute, WV, 05 April 1990.
46. "Famous Chemists in Caricature and Anecdote," Awards Seminar, University of Cincinnati, 25 May 1990.
47. "Famous Chemists in Caricature and Anecdote," University of Wisconsin - Stevens Point, Stevens Point, WI, 14 September 1990.
48. "Frank Wigglesworth Clarke's 1880 Report on Chemical Education in the United States," Invited Speaker, Rhode Island Section of the ACS, Providence, RI, 13 October 1990.
49. "Famous Chemists in Caricature and Anecdote," College of St. Thomas, St. Paul, MN, 06 December 1990.
50. "Two Hundred Years of the Chemistry Set," Macalester College, St. Paul, MN, 07 December 1990.
51. "Two Hundred Years of the Chemistry Set," Eastern Michigan University, Ypsilanti, MI, 30 January 1991.
52. "Famous Chemists in Caricature and Anecdote," Capital University, Columbus, OH, 18 February 1991.
53. "Frank Wigglesworth Clarke's 1880 Report on Chemical Education in the United States," Krause Club, Cincinnati, OH, 28 February 1991.
54. "Two Hundred Years of the Chemistry Set," Invited Lecture, University of Pittsburgh, Pittsburgh, PA, 29 April 1991.

55. "The Pimentel Report on the Periodic Table: The Report that Never Was," Inorganic Seminar, University of Cincinnati, Cincinnati, OH, 14 May 1991.
56. "Early History of the Department of Chemistry," Research Associate's Meeting, University of Cincinnati, Cincinnati, OH, 18 June 1991.
57. "Two Hundred Years of the Chemistry Set," Keynote Lecture for the 39th MACTLAC Conference, Albion College, Albion, MI, October 11, 1991.
58. "August Horstmann and the Origins of Chemical Thermodynamics," Associated Colleges of the Chicago Area Lecture Series, Argonne National Laboratory, Argonne, IL, 05 November 1991.
59. "The Pimentel Report on the Periodic Table: The Report that Never Was, Part II," Inorganic Seminar, University of Cincinnati, Cincinnati, OH, 04 February 1992.
60. "August Horstmann and the Origins of Chemical Thermodynamics," University of Missouri, St. Louis, MO, 10 February 1992.
61. "Communicating Solid-State Structures to the Uninitiated," Purdue University, Lafayette, IN, 25 February 1992.
62. "Organizers and Dissenters: A Century of the Cincinnati Section of the ACS," Centennial Celebration, Cincinnati Section of the ACS, Cincinnati, OH, 11 March 1992.
63. "Two Hundred Years of the Chemistry Set," Dayton Section of the ACS, Dayton, OH, 17 March, 1992.
64. "The Chemistry of Bug-Eyed Silicon Monsters," Education Group, Pittsburg Section, ACS, Pittsburg, PA, 3 December 03, 1992.
65. "Captain Nemo's Battery: Chemistry and the Science Fiction of Jules Verne," Columbus Section, ACS, Columbus, OH, 11 February 1993.
66. "A Contracted History of the Lanthanide Contraction: A Personal Odyssey," Inorganic Seminar, University of Cincinnati, Cincinnati, OH, 02 March 1993.

67. "Captain Nemo's Battery: Chemistry and the Science Fiction of Jules Verne," Northeast Ohio Section, ACS, Parkersburg, WV, 29 April 1993.
68. "Captan Nemo's Battery: Chemistry and the Science Fiction of Jules Verne," University of Saint Thomas, Saint Paul, MN, 13 May 1993.
69. "Captain Nemo's Battery: Chemistry and the Science Fiction of Jules Verne," 1993 Awards Seminar, University of Cincinnati, Cincinnati, OH, 28 May 1993.
70. "A Short History of the van Arkel Bond Type Triangle," Inorganic Seminar, University of Cincinnati, Cincinnati, OH, 09 November 9, 1993.
71. "Two Centuries of the Chemistry Set," Central Michigan University, Mount Pleasant, MI, 15 November 1993.
72. "Captain Nemo's Battery: Chemistry and the Science Fiction of Jules Verne," University of Kansas Section, ACS, and Sigma Xi, University of Kansas, Lawrence, KS, 23 February 1994.
73. "Captain Nemo's Battery: Chemistry and the Science Fiction of Jules Verne," College of Mt. Saint Joseph, Cincinnati, OH, 4 March 1994.
74. "Two Centuries of the Chemistry Set," Featured Speaker, 26 Annual Undergraduate Research Conference, Southeastern Tennessee Regional ACS, Middle Tennessee State University, Murfreesboro, TN, 25 March 1994.
75. "Captain Nemo's Battery: Chemistry and the Science Fiction of Jules Verne," Purdue University, West Lafayette, IN, 13 April 1994.
76. "The Chemistry of Bug-Eyed Silicon Monsters," University of Saint Thomas, Saint Paul, MN, 28 April 1994.
77. "Two Centuries of the Chemistry Set," University of Saint Thomas, Saint Paul, MN, 28 April 1994.
78. "The Chemistry of Bug-Eyed Silicon Monsters," Wright State University, Dayton, OH, 20 May 1994.

79. "Captain Nemo's Battery: Chemistry and the Science Fiction of Jules Verne," University of Tennessee, Martin, TN, 08 September 1994.
80. "Two Centuries of the Chemistry Set," Tennessee Technological University, Cookeville, TN, 09 September 1994.
81. "From the Pneumatic Trough to the PC: Apparatus Innovation and the History of Chemistry," Departmental Colloquium, University of Wisconsin, Madison, WI, 24 February 1995.
82. "To Demonstrate the Truths of Chymistry: 300 Years of Chemical Demonstrations," Maryland Section of the ACS, Baltimore, MD, 15 March 1995.
83. "To Demonstrate the Truths of Chymistry: 300 Years of Chemical Demonstrations," Student ACS Group, University of Pittsburgh, PA, 14 April 1995.
84. "To Demonstrate the Truths of Chymistry: 300 Years of Chemical Demonstrations," The Da Vinci Society, Linda Hall Science Library, Kansas City, MO, 12 May 1995.
85. "The Chemistry of Bug-Eyed Silicon Monsters," Department of Biochemistry, University of Kansas Medical School, Kansas City, KA, 12 May 1995.
86. "Electronegativity from Avogadro to Pauling," Cleveland Section of the ACS, John Carroll University, Cleveland, OH, 07 June 1995.
87. "To Demonstrate the Truths of Chymistry: 300 Years of Chemical Demonstrations," Marshall University, Huntington, WV, 03 October 1995.
88. "To Demonstrate the Truths of Chymistry: 300 Years of Chemical Demonstrations," Purdue University, West Lafayette, IN, 20 October 1995.
89. "To Demonstrate the Truths of Chymistry: 300 Years of Chemical Demonstrations," University of Saint Thomas, Saint Paul, MN, 26 October 1995.
90. "The Chemistry of Bug-Eyed Silicon Monsters," Keynote Lecture, 43 MACTLAC Conference, Hamlin College, Saint Paul, MN, 27 October 1995.

91. "From Van Arkel Triangles to Yeh Prisms," Inorganic Seminar, University of Cincinnati, Cincinnati, OH, 14 November 1995.
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PR Notices

1. Earlier publication highlighted in *Nature*, **2005**, 433 (Jan 20), 197.
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3. National ACS presentation highlighted in *Chem. Eng. News*, **2005** (Oct 10), 50.
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6. Earlier article on “The Thermodynamics and Kinetics of Heater Meals,” reprinted by the Red Cross.
7. Articles on the “Origin of the Liebig Condenser” and “The Origins of Pyrex” reprinted by the American Society of Glass Blowers.
8. Appearances on the History Channel’s documentary “Civil War Terrorism” which aired in November 2006 . Various scenes filmed in the Oesper Collections as well.
9. Museum highlighted in *Cincinnati Magazine*, February 2007, pp. 20-21.
10. Commentary on HgF₄ highlighted on the NNNNS Chemistry Blog., 23 September 2008.
11. Item 172 in above bibliography cited by ACS website in 2011 as among the 10 most read chapters in its published Symposium Series.

Speaking Invitations Turned Down for Lack of Travel Support

1. Department of Chemistry, SUNY Brockport, Brockport, NY, 2005.
2. Department of Chemistry, Alvenia College, Reading, PA. 2005.
3. 2006 Gordon Conference in Inorganic Chemistry, Newport, RI, July 2006.