

RESUME OF HOWARD H. PATTERSON

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Education: Occidental College, A.B. Chemistry 1961
Massachusetts Institute of Technology,
M.S. Chemistry 1964
Brandeis University, Ph.D. Chemistry 1968

Experience: Assistant Professor, University of Maine
Department of Chemistry, 1968-1973
Associate Professor, University of Maine
Department of Chemistry, 1973-1979
Sabbatical Leave, Solid State Physics Department,
Brookhaven National Laboratories, 1975-1976
Professor of Chemistry, University of Maine, 1979-present
Visiting Professor, Massachusetts Institute of
Technology, 1986-1987

Professional Societies:

American Chemical Society
American Physical Society
New England Section American Physical Society

Honors: Sigma Xi
Faculty Achievement Award, 1980

Former Students:

My former Ph.D. students have been very successful. For example, Dr. Mohammed Omary, who received his Ph.D. in 1997, completed a post-doctoral appointment with Professor John Fackler at Texas A&M University and is now an Associate Professor at North Texas University. Dr. Omary recently received a NSF Career Grant for five years with \$100,000 awarded annually. Dr. Christie Laroche received her Ph.D. in 2001 with me and is now an Associate Professor of Physics at Franklin and Marshall College in Pennsylvania. Dr. Sofian Kanan is now an Associate Professor of Chemistry at the American University of Sharjah in Sharjah in the United American Emirates. Dr. Zerihun

Assefa was a permanent staff member at Oak Ridge National Laboratory in Tennessee, and now is an Associate Professor of Chemistry at North Carolina A&T State University.

Fifty one graduate students in Chemistry (38), Physics (4), Biochemistry (2), Environmental Science (6) and Mathematics (1) have carried out their M.S. and Ph.D. thesis research under my direction.

Twelve post-doctoral research associates have worked under my direction. For example, Dr. Haiyan Lu, worked in my laboratory for two years, and now he is an Associate Professor of Chemistry at Jilin University, China. Additionally, a professor from Dickinson College, Gerald Roper, spent a sabbatical year in my laboratory, while Professor Joseph Rizzo of Norwich University in Vermont spent a six-month sabbatical leave in my laboratory. Faculty members from Colby College in Maine, San Angelo State in Texas, the University of Southern Maine, and the University of New England have carried out summer research projects with me at the University of Maine.

Publications:

1. "The Optical Spectra of Os(+4) in Single Cubic Crystals at 4.2 K", J. Chem. Phys., 49 3845 (1968), Paul B. Dorain, Howard H. Patterson And Peter C. Jordan.
2. "Intensities in Octahedral Complexes of 4d and 5d Transition Metal Ions", J. Chem. Phys., 49 3858 (1968), Peter C. Jordan, Howard H. Patterson and Paul B. Dorain.
3. "The Optical Spectra of Ru(+4) in Single Cubic Crystals at 4.2 K", J.Chem. Phys., 52 849 (1970), Howard H. Patterson and Paul B. Dorain.
4. "Optical Spectrum of the Hexachloromolybdate (V) Ion in Single Crystals of Cesium Hexachlorozirconate (IV) at 4 K", Inorg. Chem., 11, 520 (1972), Howard H. Patterson and John L. Nims.
5. "Sharp-Line Luminescence of the Hexabromorhenate (IV) Ion in Single Crystals of Cesium Hexabromozirconate (IV) at 20 K", J. Mol. Spectroscopy, 42, 567 (1972), Howard H. Patterson, John L. Nims, and Carmen M. Valencia.
6. "Sharp-Line Luminescence and Absorption Spectra of the Tetrachloroplatinate (II) Ion Doped in Single Crystals of Cesium Hexachlorozirconate (IV) at 4 K", Inorg. Chem. 11, 2872 (1972), Howard H. Patterson, John J. Godfrey and S.M. Khan.
7. "Sharp-Line Luminescence and Absorption for the Hexabromoosmate (IV) Ion in Single Crystals of Cesium Hexabromozirconate (IV) at 20 K", Inorg. Chem., 12, 1602 (1973), John L. Nims, Howard H. Patterson, S.M. Khan, And Carmen M. Valencia.
8. "Magnetic Circular Dichroism and Absorption Spectra of Cs₂ZrCl₆:Mo(+4)", Molecular Physics, 27, 1291 (1974), John C. Collingswood, Robert W. Schwartz, Paul N. Schatz (University of Virginia) and Howard H. Patterson.
9. "Adsorption Spectra of the Tetrachloropalladate (II) Ion Doped in Cesium Hexachlorozirconate (IV) Type Single Crystals at 2°K", Inorg. Chem., 15, 1291 (1976), Thomas G. Harrison, Howard H. Patterson, and John J. Godfrey.
10. "Isotopic Splitting in the Sharp-Line Luminescence Spectrum of the Tetrachloroplatinate (II) Ion at 4°K", Inorg. Chem. 15, 1461 (1976), Howard H. Patterson, Thomas G. Harrison, and Robert J. Belair.
11. "Optical Spectra of the Tetrabromopalladate (II) Ion Doped in Cesium Hexabromozirconate (IV) at 2 K", Inorg. Chem. 15, 3018 (1976), Thomas G. Harrison, Howard H. Patterson, and Martha T. Hsu.
12. "Low-Temperature Luminescence and Absorption Spectra of the d⁶Hexafluoroplatinate (IV) Ion Doped in a Cs₂GeF₆- Type Host Lattice", Inorg.

- Chem., 16, 1698 (1977), Howard H. Patterson, William J. DeBerry, Joseph E. Byrne, Martha T. Hsu, and Joseph A. LoMenzo.
13. "Electronic Absorption Spectra of the $5d^3$ Hexafluororhenate (IV) Ion", J. Mol. Spec. 66, 150 (1977), Joseph A. Lo Menzo, Suzanne Strobridge and Howard H. Patterson.
 14. "Multiple State Luminescence for the d^4 OsCl_6^{-2} Impurity Ion in K_2PtCl_6 Cubic Crystals", Molecule Physics, 35, 1623 (1978), with S.M. Khan and Herbert Engstrom (Brookhaven National Laboratory).
 15. "Soft Rotary Mode and Structural Phase Transitions in K_2ReCl_6 ", Solid State Comm., 27, 859 (1978), with J.W. Lynn, G. Shirane (Brookhaven National Laboratory), and R.G. Wheeler (Yale University).
 16. "Lattice Dynamics Study of Cs_2SiF_6 with Application to the Vibronic Optical Spectra of MnF_6^{-2} ", Phys. Rev. B19, 1213 (1979), Howard H. Patterson and Jeff W. Lynn (University of Maryland).
 17. "Enhancement of Luminol Chemiluminescence with Halide Ions", Analy. Chem. 51, 2289, (1979) Dan E. Bause and Howard H. Patterson.
 18. "Trimethylacetamide Platinum Blue", Inorg. Chem., 19, 1656 (1980), Michel Laurent, John C. Tewksbury, Mary-Beth Krogh-Jespersen, Howard H. Patterson.
 19. "Halide Ion Enhancement of Chromium (III), Iron (III), and Cobalt (II) Catalysis of Luminol Chemiluminescence", Analy. Chem., 52, 653 (1980), Cheng A. Chang and Howard H. Patterson.
 20. "Chemiluminescence Analysis of Free Trivalent Chromium in Seawater", Analy. Chem., 52, 1264 (1980), Cheng A. Chang, Howard H. Patterson, Dan E. Bause, and Larry M. Mayer.
 21. "Sharp-Line Absorption, Luminescence, Raman Studies for the $5d^3$ Hexafluororhenate (IV) Ion in Pure and Host Crystal Environments", Molecular Physics, 40, 1401 (1980), Joseph LoMenzo, Howard H. Patterson, Suzanne Strobridge and Herbert Engstrom (Brookhaven National Laboratory).
 22. "Optical Properties of Mixed-Valence Platinum Halides", Chemical Physics Letters, 73, 451 (1980), Michael Albin and Howard H. Patterson.
 23. "Pure and Mixed Crystal Optical Studies of the Jahn-Teller Effect for the d^6 Hexafluoroplatinate (IV) Ion", Inorg. Chem., 20, 372 (1981), Michael P. Laurent, Howard H. Patterson, William Pike (Physics Undergraduate at UM) and Herbert Engstrom (Brookhaven National Laboratory).

24. "Interpretation of MnF_6^{2-} : Cs_2SiF_6 , Impurity Ion Spectra from a Lattice Dynamics Model for Cs_2SiF_6 ", *Chemical Physics Letters*, 74, 156 (1980), Howard H. Patterson, Z. Hasan, and N.B. Manson. (Australian National University).
25. "Luminescence Study of the Chain Compound, $\text{BaPd}(\text{CN})_4 \cdot 4\text{H}_2\text{O}$ ", *Inorg. Chem.*, 20, 781 (1981), William D. Ellenson, Kasi Viswanath, And Howard Patterson.
26. "Metal-Metal Distances in a Platinum Acetamide Blue", *J. Am. Chem. Soc.*, 102, 6575 (1980), M.P. Laurent, John Biscoe, and Howard H. Patterson.
27. "The Platinum Phthalimide Blues": Synthesis and Physical Characterization, Hush Model Interpretation of Optical Spectra", *Inorg. Chem.*, 20, 1632 (1981), Cheng A. Chang, Ronald B. Marcotte, and Howard H. Patterson.
28. "Laser Excited Luminescence and Optical Absorption Studies of Interacting Tetracyanoplatinate Ions in Crystals, Pellets and Frozen Aqueous Solutions", *Molecular Physics*, 42, 1421 (1981), A. Kasi Viswanath, J. Vetuskey, C. Baker, W.D. Ellenson, and H.H. Patterson.
29. "Luminescence, Absorption, MCD, and NQR Study of the cis and trans-Isomers of Dichlorodiammine Platinum (II)", *Inorg. Chem.*, 20, 2297, (1981), Howard H. Patterson, John C. Tewksbury, Marilyn Martin, Mary-Beth Krogh-Jespersen, Joseph A. LoMenzo, Henry O. Hooper (UM Physics Dept.), and A. Kasi Viswanath.
30. "Laser Excited Luminescence and Absorption Study of Monomer and Cluster Tetracyanopalladate (II) Species in Mixed Crystals", *Inorg. Chem.*, 20, 3493 (1981), A. Kasi Viswanath, Jeannette Vetuskey, William D. Ellenson, Mary-Beth Krogh-Jespersen, and Howard H. Patterson.
31. "Energy Transfer from Delocalized Platinum-Nickel Excited State to Platinum Clusters in Quasi-One-Dimensional $\text{Ba}(\text{Pt}, \text{Ni})(\text{CN})_4 \cdot n\text{H}_2\text{O}$ Crystals", *Chem. Phys. Letters*, 82, 25 (1981), A. Kasi Viswanath and Howard H. Patterson.
32. "Laser Excited Luminescence and Absorption Study of Mixed Valence for $\text{K}_2\text{Pt}(\text{CN})_4 - \text{K}_2\text{Pt}(\text{CN})_6$ ", *Chem. Phys. Letters*, 87, 612 (1982), A. Kasi Viswanath, Wayne L. Smith (Colby College, Waterville, Maine) and Howard Patterson.
33. "Multi-State Luminescence, Absorption and MCD Studies of the Relative Energies of d-d, d- π^* and π - π^* Transitions for the Cis and Trans Isomers of Dichlorodipyridine Platinum (II)", *Inorg. Chem.* 22, 647 (1983), Michael Laurent, Kasi Viswanath and Howard Patterson.
34. "Luminescence and Absorption Study of Delocalized and Localized Electronic States in Quasi-One-Dimensional $\text{Ba}(\text{Pt}, \text{Pd})(\text{CN})_4$ and $\text{Ba}(\text{Pt}, \text{Ni})(\text{CN})_4$ Systems", *Molecular Physics*, 48, 567 (1983), A. Kasi Viswanath, Jeanette Vetuskey, Mary-Beth Krogh-Jespersen, and Howard H. Patterson.

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37. "A Chemiluminescence Technique for Studying Dynamic Behavior of Trace Element Species in Environmental Systems", *Water Research* 18, 87 (1984), Sorour Amirhaeri, Robert Koons, Marilyn Martin and Howard Patterson.
38. "Luminescence Studies of Interacting Metal Complexes in Two Dimensions", *J. of Lumin.* 31 and 32, 555 (1984). Howard Patterson, Gerald Roper, John Biscoe, Andreas Ludi (University of Bern, Switzerland) and Nils Blom.
39. "Luminescence of Cesium Dicyanoaurate (I). Evidence for Extended Au(I)-Au(I) Interactions in Two Dimensions", *Chem. Phys. Lett.* 118, 258 (1985) J.T. Markert, N. Blom, G. Roper, A.D. Perregaux, N. Nagasundaram, M.R. Corson, A. Ludi (University of Bern, Switzerland), J.K. Nagle (Bowdoin College), and H.H. Patterson.
40. "Kinetics of Aluminum Fluoride Complexation in Acidic Waters", *Environ. Sci. Technol.* 20, (2) 160 (1986), B.J. Plankey, H.H. Patterson and C.S. Cronan (UM Botany Department).
41. "Single-Crystal Luminescence Study of the Layered Compound $\text{KAu}(\text{CN})_2$ ", *Inorg. Chem.* 25, 2947 (1986) N. Nagasundaram, G. Roper, J. Biscoe, J.V. Chai, H.H. Patterson, N. Blom, and A. Ludi (University of Bern, Switzerland).
42. "Kinetics of Aluminum – Fulvic Acid Complexation in Acidic Waters", *Environ. Sci. Technol.* 21, 505 (1987), B.J. Plankey and H.H. Patterson
43. "A Kinetic Study of Aluminum Adsorption by Aluminosilicate Clay Minerals", *Geochimica Cosmochimica Acta*, 52, (1987), W.J. Walker, C.S. Cronan and H.H. Patterson.
44. "The Use of Synchronous Scan Fluorescence for the Analysis of Fuel Oil and Oil Degradation on Soil", *Analy. Chem.* 59, 2180 (1987), T.S. Taylor and H.H. Patterson.
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46. "A Kinetic Study of the Complexation of Aluminum in the Presence of Fluoride Ion and Fulvic Acid", *Environ. Sci. Technol.* 22, 1454 (1988), B.J. Plankey and H.H. Patterson.
47. "Intramolecular Excited-State Electron-Transfer in a Covalently Linked Porphyrin-Viologen Molecule: Direct Observation of the Charge-Separated Intermediate by Resonance Raman Spectroscopy", *J. Am. Chem. Soc.*, 110, 2670 (1988), R.J. McMahon, K.R. Force, H.H. Patterson and M.S. Wrighton (M.I.T.).
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49. "Dynamic Photoluminescence Studies of Vanadium Oxide Anchored on SiO₂, and the Effect of Added O₂ and H₂O", *Research and Chemical Intermediates*, 11, 245 (1989), M. Anpo (University of Osaka, Japan), M. Sunamoto, T. Fujii, H.H. Patterson, M. Che.
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51. "On the Mechanism of Ligand Substitution in Aluminum (III) Complexes", *Inorg. Chem.*, 28, 4331 (1989), B.J. Plankey and H.H. Patterson.
52. "Aluminum Toxicity in Forests Exposed to Acidic Deposition – The Albios Results", *Water, Air and Soil Pollution* 48, 181 (1989), C.S. Cronan, H.H. Patterson, et al.
53. "A Chemiluminescence Study of the Kinetics of Reaction of Cr(III) with Carboxylate Ligands: Oxalate, Salicylate and Humic Acid", *Canadian J. Of Chem.* 58 881 (1990), D.L. Huizenga and H.H. Patterson.
54. "Photoluminescence and Electronic Structure of Tl₂Pt(CN)₄ and Tl[Au(CN)₂]: Evidence for Direct Thallium-Gold Interactions", *Mol. Cryst. Lig. Cryst.* 181, 359 (1990), J.K. Nagle (Bowdoin College), J.H. Lacasce, Jr., P.J. Dolan Jr., M.R. Corson, Z. Assefa and H.H. Patterson.
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56. "Relationship Between the Geometry of the Excited State of Vanadium Oxides Anchored onto SiO₂ and Their Photoreactivity Toward CO Molecules", *J. Phys.*

Chem. 95, 8813 (1991), Howard H. Patterson, Jian Cheng, Scott Depres, Masatoshi Sunamoto and Masakazu Anpo (University of Osaka, Japan).

57. "Comparison of Soil Fulvic Acids Using Synchronous Scan Fluorescence Spectroscopy, FTIR, Titration and Metal Complexation Kinetics", *Science Of the Total Environment*, 113, 179 (1992), H.H. Patterson, C.S. Cronan, S. Lakshman, B.J. Plankey and T.A. Taylor.
58. "Spectroscopic Studies of New Model Compounds for Poly[N,N'-bis (phenoxyphenyl)pyromellitimide], *J. of Polymer Science* 30, 419 (1992), Ajay K. Saini, Clifford M. Carlin and Howard H. Patterson.
59. "Effects of Disturbance and Soil Amendments on DOC and Organic Acidity in Red Pine Forest Floors", *J. of Environmental Quality*, 21, 457 (1992), Christopher S. Cronan, Sukla Lakshman and Howard H. Patterson.
60. "One- and Two-Photon Spectroscopy of the Hexafluoroplatinate (IV) Ion", *Inorg. Chem.* 31, 2809 (1992) Cecelia Campochiaro, Donald S. McClure (Princeton University), and Howard H. Patterson.
61. "Determination of Aqueous Aluminum with the Fluorescent Chelate, 2-Hydroxy-1-Carbazole-Carboxylate: I. A Model for Speciation and Stability Constants", *Analytica Chimica Acta*, 278, 249-257 (1993), Todd A. Taylor and Howard H. Patterson.
62. "Determination of Aqueous Aluminum with the Fluorescent Chelate, 2-Hydroxy-1-Carbazole-Carboxylate: II. Application of Ratio Fluorescence Spectroscopy", *Analytica Chimica Acta*, Todd A. Taylor, Howard H. Patterson, Christopher S. Cronan and Carl L. Schofield.
63. "Effects of Dietary Manganese Deficiency on High Density Lipoprotein Composition and Metabolism in Sprague-Dawley Rats", *Nutrition Research* 31, 953 (1993), Dorothy Klimis-Tavantzis, Paul N. Taylor, Robert A. Lewis, Ana L. Flores and Howard H. Patterson.
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66. "Effect of Dose Stoichiometry on the Structure of Vapor Deposited Polyimide Thin Films", *Journal of Materials Research*: 8, 3218 (1993), R.G. Pethe, C.M. Carlin, H.H. Patterson and W.N. Unertl.

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Talks and Papers:

1. "Optical Spectra of Os⁺⁴ in Single Crystals of Cs₂ZrCl₆", and K₂PtCl₆", *Bull. Am. Phys. Soc.*, 12, 294 (1967), Paul B. Dorain and Howard H. Patterson.
2. "Optical Spectra of Ru⁺⁴ in Cubic Single Crystals at 4.2°K", *Bull. Am. Phys. Soc.* 14, 412 (1969), Howard H. Patterson and Paul B. Dorain.
3. "The Optical Spectra of Pd⁺² and Pt⁺² in Single Crystals of Cs₂ZrCl₆ and Cs₂HfCl₆ and 4.2°K", *Bull. Am. Phys. Soc.*, 16, 449 (1971), Howard H. Patterson and John Godfrey.
4. "Optical Spectra of Mo⁺⁵ and W⁺⁵ in Single Crystals of Cs₂ZrCl₆ and Cs₂HfCl₆ at 4°K", 162nd National ACS Meeting – Washington, D.C., Sept., 1971, Howard H. Patterson and John L. Nims.
5. "Sharp-Line Luminescence of the Hexabromorhenate (IV) Ion and the Hexabromoosmate (IV) Ion in Cesium Hexabromozirconate (IV) at 20°K", Twenty-

- Seventh Symposium on Molecular Structure and Spectroscopy, Ohio State University, Columbus, Ohio, 1972, Howard H. Patterson, John L. Nims and Carmin M. Valencia.
6. "Sharp-Line Luminescence and Absorption for the Hexabromoosmate (IV) (IV) Ion in Single Crystals of Cesium Hexabromozirconate (IV) at 20 K", 165th National ACS Meeting – Dallas, Texas, March 1973, Howard H. Patterson, Thomas Harrison, and S.M. Khan.
 7. "The Optical Spectrum of the Hexafluoroplatinate (IV) Ion Doped in Single Crystals of Cesium Hexafluorogermanate (IV) at 20 K", 169th National ACS Meeting – Philadelphia, April, 1975, Howard H. Patterson, William J. DeBerry.
 8. "The Optical Spectra of Impurity Ions in a Cs₂ZrCl₆ Type Host", Howard H. Patterson, Brookhaven National Laboratory, April 1975.
 9. "Sharp-Line Luminescence of Os⁴⁺ in Single Cubic Crystals of Cs₂ZrCl₆ at 20 K", 30th Annual Symposium on Molecular Structure and Spectroscopy, Ohio State University, Columbus, Ohio, June 1975, Howard H. Patterson With S.M. Khan.
 10. "Spectroscopic Studies of Platinum-Nitrogen Type Complexes", 173rd National ACS Meeting – New Orleans, March 1977, H.H. Patterson With J.T. Tewksbury, J.A. LoMenzo, M.T. Hsu and H.O. Hooper.
 11. "Luminescence of Inorganic Platinum-Type Anticancer Compounds", Twenty-Second Annual Meeting, Biophysical Society Meeting, Washington, D.C., March 1978, Howard H. Patterson, J.A. LoMenzo, J.T. Tewksbury, M.T. Hsu, H.O. Hooper.
 12. "Electronic and Chemical Properties of some Platinum Blue Compounds", 176th American Chemical Society National Meeting, Miami Beach, Florida, Sept. 1978, H.H. Patterson, J.T. Tewksbury, J.A. LoMenzo, M.P. Laurent and M-B Krogh-Jespersen.
 13. "Optical Spectra of Transition Metal Complexes", Howard H. Patterson, Chemistry Department, Invited Seminar, Iowa State University, Ames, Iowa, October 12, 1978.
 14. "Optical Spectra of Inorganic Complexes", Howard Patterson, Department of Chemistry Colloquium, Polytechnic Institute of New York, Brooklyn, New York, February 21, 1979.
 15. "Electronic Structure of Platinum Anticancer Agents", Howard Patterson, Department of Chemistry Seminar, University of Vermont, Burlington, Vermont, March 22, 1979.
 16. "Optical Studies of Interacting Square Planar Ni(II), Pd(II), and Pt(II) Tetracyanide Ions", National ACS Meeting – Honolulu, Hawaii, April, 1979, Howard Patterson

with Cheryl Baker, Jeannette Vetuskey, Mary-Beth Krogh-Jespersen, and Wayne Smith (Colby College).

17. "Molecular Orbital Studies of the Structural and Electronic Properties of some Platinum Anti-Cancer Agents", National ACS Meeting, Honolulu, Hawaii, April 1979, Howard Patterson with Mary-Beth Krogh-Jespersen, Michel Laurent, and Tom Shattuck (Colby College).
18. "Metal-Metal Bonding in Inorganic Complexes", Howard Patterson, Chemistry Seminar, University of Massachusetts at Amherst, April 23, 1979.
19. "Luminescence and Absorption Studies of Octahedral and Square Planar Compounds", Howard Patterson, Invited Physical and Theoretical Chemistry Colloquium. University Dusseldorf, Dusseldorf, Germany, September 6, 1979.
20. "Platinum Blues", Howard Patterson, NATO Advanced Study Institute, St. Johns College, Oxford, England, September 15, 1979.
21. "Platinum Mixed Valence Complexes as Studied by Optical Spectroscopy", Howard Patterson, NATO Advanced Study Institute, St. Johns College, Oxford, England, September 20, 1979.
22. "Platinum Blues and Mixed Valence Compounds", Howard Patterson, University of Connecticut Seminar, February 21, 1980.
23. "Determination of Chromium Speciation in Aquatic and Marine Environments", Howard Patterson, 179th ACS National Meeting, Houston, Texas, March 26, 1980.
24. "New Application of Chemiluminescence in Analytical Chemistry", Howard Patterson, Clark University, April 2, 1980.
25. "Cancer, Molecules and Light", Howard Patterson, for Maine Scholars Day, University of Maine, May 25, 1980.
26. "Analytical Aspects of Chromium in the Environment", Howard Patterson, Maine Department of Environmental Protection, Technical Seminar, August, Maine, January 16, 1981.
27. "Solid State Interactions in One Dimension. Luminescence and Absorption Study of the Palladium (II) Tetracyanide Ion", National ACS Meeting, Atlanta, Georgia, April 1, 1981, Howard H. Patterson with Kasi Viswanath.
28. "Optical and Structural Characterization of Platinum Blue, A Platinum Acetamide Blue", National ACS Meeting, Atlanta, Georgia, April 1, 1981, Howard H. Patterson with John Toth, John Biscoe, Marcel Dionne and Michel Laurent.

29. "Spectroscopic Studies of Mixed Valence Complexes in Chemistry, Physics and Biology", Howard Patterson, University of Rhode Island Seminar, April 10, 1981.
30. "Metal Speciation by Chemiluminescence Trace Analysis", Howard Patterson, Dalhousie University, April 24, 1981.
31. "Chemiluminescence Analysis of Chromium Speciation in Natural Water Systems", Howard H. Patterson, Society for Applied Spectroscopy, New England Section, Invited, Lester W. Strock Seminar, Boston, Mass. April 28, 1981.
32. "Solid State Interactions in One Dimension. Optical Studies of Delocalized Electronic States in Quasi-One-Dimensional Ba(Pt,Ni)(CN)₄ and Ba(Pt,Ni)(CN)₄ Crystals", National ACS Meeting, New York, New York, September, 1981, Howard H. Patterson with A. Kasi Viswanath.
33. "The Use of Terbium Ion as a Probe of Metal – DNA Binding", National ACS Meeting, New York, New York, September, 1981, Paul Coussens and Howard H. Patterson.
34. "Using Luminescence Spectroscopy to Do Chemistry", Howard Patterson, Bowdoin College Kamerling Society Lecture, October 29, 1981.
35. "The Concept of Mixed Valence with Applications to Physics, Chemistry and Biology", Howard Patterson, University of Maine, Department of Physics Colloquium, November 20, 1981.
36. "Optical Spectroscopy as a Probe of Mixed Valence, Cluster Formation, and Delocalization versus Localization in Inorganic Solids", National ACS Meeting, Las Vegas, Nevada, April 1, 1982, Howard H. Patterson.
37. "The Nature of Platinum Blues", Howard H. Patterson, University of Massachusetts at Amherst, April 12, 1982.
38. "Optical Spectroscopy as a Probe of Intermolecular Interactions", Argonne National Laboratory, Argonne, Illinois, Howard Patterson, March 10, 1983.
39. "Use of Lanthanum (III) Ions to Study Nucleic Acid and Nucleic Acid-Pt(NH₃)₂Cl₂ Properties", National ACS Meeting, Seattle, Washington, March 22, 1983, Howard H. Patterson, Todd Taylor, Jerry LeBlond and Paul Coussens.
40. "Electronic and Vibrational Studies of Metal Cyanide Complexes Doped in Alkali Halide Crystals", National ACS Meeting, Seattle, Washington, March 24, 1983, Howard Patterson, Gerald Roper, Rose Leighton, James Wong (IBM) and Paul B. Dorain (Yale University).
41. "Cancer Molecules and Light", Maine Scholars Day (140 students), May 24, 1983.

42. "Cis-Dichlorodiamineplatinum(II) DDP) Binding to Nucleotide Residues, a Low Temperature Luminescence Study", Ninth Annual Meeting Biological and Medical Science Symposium, Waterville, Maine – May 25, 1983, Todd Taylor and Howard Patterson.
43. "Use of Surface-Enhanced Raman Spectroscopy in Studying the Binding Modes of Platinum Anticancer Agents with DNA", Ninth Annual Maine Biological and Medical Science Symposium, Waterville, Maine – May 25, 1983, G. F. LeBlond and Howard Patterson.
44. "Effects of cis- and trans-Dichlorodiamineplatinum (II) on Nucleotide Luminescence", Fourth International Symposium on Platinum Coordination Complexes in Cancer Chemotherapy", Burlington, Vermont – June 22, 1983, Todd Taylor and Howard H. Patterson.
45. "Use of Terbium Ion Fluorescence to Monitor Platinum-DNA Binding", Fourth International Symposium on Platinum Coordination Complexes in Cancer Chemotherapy, Burlington, Vermont – June 23, 1983, Gerald LeBlond and Howard Patterson.
46. "Optical Spectroscopy as a Probe of Intra- and Inter-molecular Interactions in Inorganic Compounds", Chemistry Seminar, California Institute of Technology, Pasadena, California, February 27, 1984.
47. "Optical Spectroscopy as a Probe of Intra- and Inter-Molecular Interactions in Inorganic Compounds", Chemistry Seminar, University of California at Los Angeles, February 29, 1984.
48. "Luminescence as a Tool in Chemistry", Chemistry Seminar, University of California at Santa Barbara, March 1, 1984.
49. "Spectroscopic Studies of Two-Dimensional Layered Dicyano-gold (I) Salts", ACS National Meeting, St. Louis, Missouri, April 10, 1984.
50. "Luminescence Study of the Two-Dimensional Layered Compound, $\text{KAu}(\text{CN})_2$ ", National ACS Meeting, Miami Beach, Florida, April 29, 1985, H.H. Patterson, N. Nagasundaram, G.R. Roper, J. Biscoe, J.W. Chai, N. Blom, A. Ludi.
51. "Fluorescence Studies of Al(III) Interactions with Organic Ligands", National ACS Meeting, Miami Beach, Florida, April 30, 1985, T.A. Taylor, B.J. Plankey, and H.H. Patterson.
52. "Luminescence Studies of Two-Dimensional Layered Compounds", International School of Atomic and Molecular Spectroscopy on the Spectroscopy of Solid State Laser-Type Materials, June, 1985, Eric, Italy.

53. "Spectroscopic Studies of Molecule-Surface Interactions Seminar, IBM, Yorktown, New York, February, 1986.
54. "Energy Transfer from Layers of Au(I) to Rare Earth Ions", National ACS Meeting, New York, April, 1986, N. Nagasundaram, J. Partridge, J. Biscoe, H.H. Patterson.
55. "Luminescence as a Probe of Intermolecular Interactions", Physics Department, Invited Seminar, Boston College, October, 1986.
56. "Kinetics of Aluminum-fulvic acid Complexation in Acidic Waters", Analytical Chemistry and Environmental Chemistry Symposium, 70th Canadian Chemical Conference, Universite' laval Quebec, June, 1987. Invited Speaker.
57. "An In-Situ Photoluminescence Study of the Reaction of Tungsten Trioxide Films with Hydrogen Sulfide", National ACS Meeting, Toronto, Canada, June 1988, H.H. Patterson, K.S. Voelkner and T. Taylor.
58. Maine Scholars Day Presentation on "High Temperature Superconductors", May 15-17, 1988.
59. "Raman Study of Chemical Vapor Deposited Polyimide Films on Cu Substrates" 18th Northeast Regional Meeting, American Chemical Society, August 1, 1988 with R. Mack, C. Carlin and M. Cook.
60. "Spectroscopic Study of the Reaction of Tungsten Trioxide Films with Hydrogen Sulfide" 18th Northeast Regional Meeting, American Chemical Society, August 2, 1988 with K. Voelkner and T. Taylor.
61. "Quenching of the Photoluminescence of Layered Gold (I) Salts of Excited-State Energy Transfer", 18th Northeast Regional Meeting, American Chemical Society, August 2, 1988 with F. DeStefano and Thompson.
62. "A Spectroscopic Study of the Reaction of Tungsten Trioxide Films with Hydrogen Sulfide", National ACS Meeting, Los Angeles, California, September 1988 with K.S. Voelkner and T. Taylor.
63. "An Optical Study of Electron and Energy Transfer in Two-Dimensional Systems", Invited Seminar, SERI, Denver, Colorado, September, 1988.
64. "Superconductors – A Program for High School Teachers, May 6, 1989.
65. "Phosphorescence of Supported Vanadium Oxide Films", National National ACS Meeting, Miami, Florida, September, 1989 with S.Y. Lu, F. Amar and M. Anpo.

66. "Comparison of Soil Fulvic Acids Using Synchronous Scan Fluorescence Spectroscopy, FTIR, Titration and Metal Complexation Kinetics", Miami, Florida, September, 1989, Invited Talk in Symposium on Humic Substances with C.S. Cronan, B.J. Plankey, T.A. Taylor, S. Lakshman.
67. "Luminescence of Metal Oxide Films", International Conference on Luminescence", Santa Barbara, Calif. August, 1989 with T. Taylor, K. Voelkner, Y. Lu, F. Amar and M. Anpo.
68. "Energy Transfer in Layered Gold(I) Solids", International Conference on Luminescence" Santa Barbara, Calif., August, 1989 with Z. Assefa, L. Reeves and S. Ouellette.
69. "Low Temperature Raman Studies on Copper Deficient High-T_c YBa₂Cu₃O Superconductors", New England meeting of the American Physical Society, October, 1989, Orono, Maine, Z. Assefa, M. Carter, H.H. Patterson, C.W. Smith.
70. "Optical and X-Ray Studies of Tungsten Oxide Thin Films", National American Chemical Society Meeting, Boston, Mass., April, 1990, T.A. Taylor and H.H. Patterson.
71. "Dynamic Photoluminescence Spectroscopic Studies of Interaction of O₂ and H₂O with Highly Dispersed Vanadium Oxide Anchored onto Si", 1989 International Chemical Congress of Pacific Basin Societies, Hawaii, Dec., 1989, M. Anpo, M. Sunamoto, T. Fujii, M. Che, and H.H. Patterson.
72. "Photoluminescence and Electronic Structure of Tl[Au(CN)₂]" Evidence for Relativistic Thallium-Gold and Gold-Gold Covalent Interactions", National American Chemical Society Meeting, Washington, D.C., August, 1990, Z. Assefa, H.H. Patterson, M.A. Garepaghi, J.K. Nagle.
73. "Electronic Structure Studies of Some Transition Metal Compounds with Application to High T_c Superconductors and Photocatalytic Surfaces", UM Department of Physics Colloquium, Oct., 1990, Howard H. Patterson.
74. "Spectroscopic Studies of New Model Compounds of Poly[N,N'-Bis(Phenoxyphenyl)pyromellitimide]", NERM Meeting, Amherst, Mass. June, 1991; Ajay K. Saini, Howard H. Patterson and Clifford M. Carlin.
75. "Relationship Between the Geometry of the Excited State of Vanadium Oxides Anchored Onto SiO₂ and their Photoreactivity Toward CO Molecules", Lecture at the XVth International Conference on Photochemistry, held In Paris, France, July, 28 to August 2, 1991, Howard H. Patterson with Co-authors Jain Cheng, Scott Despres, Masatoshi Sunamoto and Masakazu Anpo (University of Osaka, Japan).

76. "Temperature-Dependent Luminescence, Raman and X-Ray Studies of Layered Rare Earth Gold (I) Cyanide Salts: Evidence for Energy Transfer and Relativistic Au-Au Covalent Bonding", National American Chemical Society Meeting, New York, New York, August 1991, Zerihun Assefa, Howard H. Patterson, Ross Reynolds (Grand Valley State University, Allendale, Michigan) and George Shankle (Angelo State University, San Angelo, Texas).
77. "Confirmation of the Imine Linkages in Poly [N,N'-Bis(Phenoxyphenyl)pyromellitimide]", National American Chemical Society Meeting, New York, New York, August 1991, Ajay K. Saini, Clifford M. Carlin, and Howard H. Patterson.
78. "Relationship Between the Geometry of the Excited State of Vanadium Oxides Anchored onto SiO₂ and their Photoreactivity Toward CO Materials", National American Chemical Society Meeting, New York, New York, August, 1991, Howard H. Patterson with co-authors Jian Cheng, Scott Despres, Masatoshi Sunamoto and Masakazu Anpo (University of Osaka, Japan).
79. "Insights from Kinetic Analyses of Aluminum Complexation with Fulvate Ligands", WMP Workshop on Organic Acids, Organized by the University of Illinois, held at the University of Maine, May 11-12, 1992, Howard H. Patterson.
80. "Effects of Manganese on Lipoproteins", National American Chemical Society Meeting, Washington, D.C., August, 1992, Howard H. Patterson with co-authors Robert Lewis, Paul Taylor, Wang Ke, Joseph Wellman, Ana Flores, Emely Castro Rivera, Dorothy Klimis-Tavantzis.
81. "Photoluminescence and Electronic Structure of Tl[Ag(CN)₂]: Extent of Direct Tl-Ag and Ag-Ag Covalent Interactions", National American Chemical Meeting, Washington, D.C., August, 1992, Howard H. Patterson With Zerihun Assefa, James Bourassa and George Shankle.
82. "Fluorescence Quenching and Polarization Studies of Lipoprotein in the Presence of Manganese (II): Evidence for Structure and Reactivity", Nineteenth Annual Maine Biological and Medical Sciences Symposium, Maine Maritime Academy, May 21, 1993, Robert A. Lewis, Paul N. Taylor, Howard H. Patterson and Dorothy J. Klimis-Tavantzis.
83. "Use of Iodide Ion as a Probe of Alteration in Lipoproteins with Manganese Deficiency", Nineteenth Annual Maine Biological and Medical Sciences Symposium, Maine Maritime Academy, May 21, 1993, Ke Wang, Paul N. Taylor, Howard H. Patterson and Dorothy J. Klimis-Tavantzis.
84. "New Photoluminescence Studies of Model Systems and Supported Metal Oxide Systems which Display Optical Memory", University of Osaka, Prefecture, Osaka, Japan, July, 1993, Howard H. Patterson.

85. "Photoluminescence and Photocatalytic Activity on Supported Metal Oxide Catalysis. Relation Between Excited Electronic States and Primary Molecular Processes", Tenth International Symposium on the Photochemistry and Photophysics of Coordination Compounds, Sendai, Japan, July, 1993, Howard H. Patterson with Stephen Ouellette, Steven Webber, Mohammad Omary, Masakazu Anpo.
86. "Photoluminescence Studies of Lanthanide Ion Complexes of Gold and Silver Dicyanides. A New Low Dimensional Solid State Class for Nonradiative Excited State Energy Transfer", Invited Symposium Speaker, NERM Symposium on Excited State Processes of Transition Metal Complexes, Burlington, Vermont, June, 1994. Howard H. Patterson.
87. "Biochemical and Fluorescence Spectroscopic Studies of Rat HDL₂ in Manganese Deficiency" Twentieth Annual Maine Biological and Medical Sciences Symposium, May, 1994, Bates College, Paul N. Taylor, Dorothy Klimis-Tavantzis and Howard H. Patterson.
88. "Photoluminescence and Photocatalytic Activity of Supported Metal Oxide Catalysts: Relation Between Excited Electronic States and Primary Molecular Processes" 208th American Chemical Society National Meeting, Washington, D.C., August, 1994, Howard H. Patterson, Steven Webber, Scott Schmidt, Kerry S. Capelle, Rob Cyr, Stephen M. Ouellette and Masakazu Anpo.
89. "The Effects of Manganese on Lipoprotein Structure as Related to Cardiovascular Disease" 21st Annual Maine Biological and Medical Sciences Symposium, June 8-9, 1995, Mount Desert Island, Maine. Paul N. Taylor, Manal Omary, Howard H. Patterson and Dorothy J. Klimis-Tavantzis.
90. "Enhancement of the Water Solubility of Organic Pollutants such as Pyrene and Atrazine by Dissolved Humic and Fulvic Acids", 210th American Chemical Society National Meeting, Chicago, Illinois, August, 1995, Howard H. Patterson, Bruce MacDonald, Feng Fang and Christopher Cronan.
91. "Photoluminescence and Photocatalytic Activity of Cu⁺/ZSM-5 Catalyst: Relation between Excited Electronic States and Primary Molecular Processes for the Reaction with NO", 1995 International Chemical Congress of Pacific Basin Societies, Honolulu, Hawaii, Dec. 1995, Howard H. Patterson, Steven Webber and Masakazu Anpo.
92. "Metal-metal Interactions and Tunable Radiationless Energy Transfer in Gold(I) and Silver(I) Dicyanide Solids: A New Low-Dimensional Solid-State Class of Nonradiative Excited-State Energy Transfer", 1995 International Chemical Congress of Pacific Basin Societies, Honolulu, Hawaii, Dec. 1995, Howard H. Patterson, Mohammad Omary, Zerihun Assefa and George Shankle.

93. "Luminescence Studies of Interacting Gold and Silver Dicyanide Complexes: A New Low-Dimensional Solid-State Class", Universitat Regensburg, Regensburg, Germany, May 23, 1996, Howard H. Patterson.
94. "Use of Lanthanide Ions as a Probe of Manganese Deficient and Supplemented Lipoproteins" 22nd Annual Maine Biological and Medical Sciences Symposium, May 30, 1996, University of Maine, Orono, Maine 04469, Manal Omary, Paul N. Taylor, Howard H. Patterson and Dorothy Klimis-Tavantzis.
95. "A Fluorescence Double-Quenching Technique to Assess Native Lipoprotein Structure". 22nd Annual Maine Biological and Medical Sciences Symposium, May 30, 1996 University of Maine, Orono, Maine 04469, Paul N. Taylor, Manal Omary, Howard H. Patterson And Dorothy J. Klimis-Tavantzis.
96. "Photoluminescence and Electronic Structure Studies to Probe Metal-Metal Interactions and Optical Memory in Thallium Dicyanosilver (I)", 212th American Chemical Society National Meeting, Orlando, Florida, August 25, 1996 Howard H. Patterson, Mohammad Omary and George Shankle.
97. "Photophysical Properties of $Tl[Ag(CN)_2]$: A New Class of Luminescent Metal-Metal Bonded Exciplex", Twelfth International Symposium on the Photochemistry and Photophysics of Coordination Compounds, June, 1997, Saint Michaels College, Vermont, Howard H. Patterson, Mohammad Omary, George Shankle, Zerihun Assefa and Thomas A. Webb.
98. "Discovery of Exciplex Tuning in $Ag(CN)_2^-$ Ions Doped in Alkali Halide Crystals", Twelfth International Symposium on the Photochemistry and Photophysics of Coordination Compounds, June 1997, Saint Michaels College, Vermont, Mohammad A. Omary and Howard H. Patterson.
99. "The Relationship between the Local Structure of Copper (I) Ions on $Cu^+/Zeolite$ Catalysts and Their Photocatalytic Reactivities for the Decomposition of NO_x into N_2 and O_2 at 275K", Twelfth International Symposium on the Photochemistry and Photophysics of Coordination Compounds, June 1997, Saint Michaels College, Vermont, M. Anpo, M. Matsuoka, K. Hanou, H. Yamoshata and H.H. Patterson.
100. "Tunable Energy Transfer in $Eu[Au(CN)_2]_3$, $Sm[Au(CN)_2]_3$ and $Tb[Au(CN)_2]_3$ ", Twelfth International Symposium on the Photochemistry and Photophysics of Coordination Compounds, June 1997, H. Yersin, Trumbach, JH. Strasser, H.H. Patterson, Z. Assefa and G. Shankle.
101. "Photoluminescence of $Tl[Ag(CN)_2]$: A New Class of Metal-Metal Bonded Exciplex', 214th American Chemical Society National Meeting, Sept. 7-11,1997, Las Vegas. Howard Patterson, Mohammad Omary, George Shankle, Zerihun Assefa and Thomas Webb.

102. "Kinetics and the Influence of Dissolved Organic Matter on the Photodecomposition of the Carbamate Pesticides Carbofuran, Carbaryl and Aldicarb", 216th American Chemical Society National Meeting, Aug. 23-27, 1998, Boston, Mass., Howard H. Patterson, John Bachman, Sofian Kanan.
103. "Tunable Energy Transfer from Dicyanogold (I) and Silver (I) Donors to Lanthanide Ion Acceptors" 216th American Chemical Society National Meeting, Aug. 23-27, 1998, Boston, Mass., Manal Omary, Howard H. Patterson, George E. Shankle.
104. "Luminescent Silver-Silver Bonded Excimers and Exciplexes in Dicyanoargentate (I) Ions Doped in Alkali Halide Crystals", 216th American Chemical Society National Meeting, Aug. 23-27, 1998, Boston, Mass. Mohammad A. Omar, Howard H. Patterson.
105. "Photoluminescence Study of Tunable Radiationless Energy Transfer in the Layered Solid, $\text{Eu}[\text{Au}(\text{CN})_2]_3 \cdot \text{H}_2\text{O}$ by Variation of Temperature and Pressure", 216th American Chemical Society National Meeting, Aug. 23-27, 1998, Boston, Mass., Howard H. Patterson, Hartmut Yersin, Dietrich Trumbach, Johann Strasser, Zerihun Assefa.
106. "Luminescent Homoatomic Exciplexes in Dicyanoargentate (I) Ions Doped in Alkali Halide Crystals. 'Exciplex Tuning' by Site-Selective Excitation and Variation of the Dopant Concentration", Thirteenth International Symposium On the Photochemistry and Photophysics of Coordination Compounds, June 1999, Sicily, H.H. Patterson, M.A. Omary, S.M. Kanan, N. Srisook And C. Larochelle.
107. "Luminescence and Raman Studies on "Exciplex Tuning" for Pure Dicyanoargentate and Dicyanoargentate (I) Ions Doped in Potassium Chloride Crystals" 30th American Chemical Society Northeast Regional Meeting, June 2001, University of New Hampshire, Durham N. H., Samanthika R. Hettiarachchi, Sofian M. Kanan, Howard H. Patterson, and Carl P. Tripp.
108. "Optical Memory Studies of $\text{Ag}(\text{CN})_2^-$ Doped in Sodium Chloride Crystals" 30th American Chemical Society Northeast Region Meeting, June 2001, University of New Hampshire, Durham, N.H., Howard H. Patterson and Julie Clarissa F. Colis.
109. "Optical Studies of a Novel Mixed-Metal (Silver-Gold) Layered Compound", March Meeting of the National American Physical Society, C. L. Larochelle and H. H. Patterson.
110. "Fluorescence Quenching Mass Spectral H/D Exchange and Ion Fragmentation Studies of trp-his-leu-gln-leu Upon Metal Complexation", American Chemical Society National Meeting, August 20, 2002, Boston, MA, E. Arehart, A. Fattahi, H. H. Patterson, R. C. Fort and T. Solouki.

111. "Dioxin's role in Altering Human Low-Density and Very Low-Density Lipoprotein Structure", American Chemical Society National Meeting, August 20, 2002, Boston, MA, E. Arehart and H. H. Patterson.
112. "Formation of Luminescent Gold-Gold and Silver-Silver Bonded Excimers and Exciplexes in Solution and in the Solid State", American Chemical Society National Meeting, August 20, 2002, Boston, MA, H. H. Patterson.
113. "Optical Memory Studies of Dicyanoargentate(I) and Dicyanoaurate(I) Ions Doped in Alkali Halide Crystals", American Chemical Society National Meeting, August 20, 2002, Boston, MA, S. R. Hettiarachchi and H. H. Patterson.
114. "Optical Studies of Lanthanide Ion Complexes of Mixed Metal (Gold-Silver) Dicyanides", American Chemical Society National Meeting, August 20, 2002, Boston, MA, J. C. Colis, C. L. Larochele and H. H. Patterson.
115. "Temperature-Dependent and Time-Resolved Luminescence Studies of bis(thiocyanato)gold(I) Complexes" 225th American Chemical Society National Meeting, March 23-27, 2003, New Orleans, LA, R. K. Arvapally, N. L. Coker, S. R. Hettiarachchi, R. C. Elder, H. H. Patterson and M. A. Omary.
116. "Photochemistry and Energy Tunability of Luminescent Gold-Gold and Silver-Silver Bonded Excimers and Exciplexes", 31st Northeast Regional Meeting of the American Chemical Society, Invited Symposium on Brilliant Chemistry: Light Emission and/or Harvesting via Organic and Organometallic Materials, June 15, 2003, Saratoga Springs, NY, H. H. Patterson.
117. "Luminescence Studies of Layered Lanthanide Mixed Metal (Gold-Silver) Dicyanides with Tunable Delocalized Excited States", 31st Northeast Regional Meeting of the American Chemical Society, Invited Symposium on Brilliant Chemistry: Light Emission and/or Harvesting via Organic and Organometallic Materials, June 15, 2003, Saratoga Springs, NY, J. C. Colis, C. L. Larochele, R. Staples, C. Tripp and H. H. Patterson.
118. "Tunable" Photoluminescence and Energy Transfer of Terbium (III) Dicyanoargentate(I) Powders", 227th American Chemical Society National Meeting, March 28, 2004, Anaheim, California. H. J. Tracy, J. C. F. Colis, J. Haug, H. H. Patterson.
119. "Tunable Luminescence and Optical Memory in Nanoclusters of $\text{Ag}(\text{CN})_2^-$ and $\text{Au}(\text{CN})_2^-$ Doped in Alkali Halide Matrices", 227th American Chemical Society National Meeting, April 1, 2004, Anaheim, California. H. H. Patterson, M. A. Omary, J. C. F. Colis, S. R. Hettiarachchi.
120. "Luminescence Energy Tunability and Enhanced Luminescence Intensity for Closed Shell d^{10} Heterobimetallic Gold-Silver Dicyanide Systems" Symposium on

- Frontiers in Inorganic Spectroscopy and Photochemistry. 229th American Chemical Society National Meeting, San Diego, California. March, 2005, H.H. Patterson, J. C. F. Colis, Z. Guo.
121. "Oligomerization, Exciplex Tuning, and Energy Transfer in Dicyano Complexes of Ag(I) and Au(I)" Symposium on the Metal-Cyanide Renaissance, Tricentennial of the Synthesis of Prussian Blue, 229th American Chemical Society National Meeting, San Diego, California. March, 2005, H.H. Patterson, J. C. F. Colis, Z. Guo.
 122. "Silver Clusters Doped in Zeolites as Photocatalysts for the Decomposition of NO_x, Malathion, Carbaryl and Other Pollutants" Symposium on Environmental Applications of Inorganic Chemical Advanced Catalysis. 229th American Chemical Society National Meeting, San Diego, California. March, 2005, B. Schaefer, H.H. Patterson, R. N. Austin, J. Wyman, R. Whippe.
 123. "Nanoclusters of Silver Doped in Zeolites as Photocatalysts," 2005 International Chemical Congress of Pacific Basin Societies, Honolulu, Hawaii, December, 2005, Howard H. Patterson, Robert S. Gomez, Haiyan Lu, and Renante L. Yson.
 124. "Metallic Interactions in Zeolites," 2005 International Chemical Congress of Pacific Basin Societies, Honolulu, Hawaii, December, 2005, Brian K. Schaefer, John Anderson, Susan MacKay, and Howard Patterson.
 125. "Vapochromism, Luminescence, Birefringence and Magnetism of d¹⁰-Metal Cyanide-based Coordination Polymers," 61st Northwest Regional Meeting of the American Chemical Society, Reno, NV, United States, June 25-28 (2006), Leznoff, Daniel B.; Katz, Michael J.; Lefebvre, Julie; Callaghan, Fergal; Sonier, Jeff E.; Yson, Renante; Lu, Haiyan; Patterson, Howard H.
 126. "Solvent dependent tunable energy transfer between d¹⁰ metal dicyanide nanoclusters and Eu³⁺ and Tb³⁺ rare earth ions," 234th ACS National Meeting, Boston, MA, United States, August 19-23, 2007, Guo, Zhonghua; Patterson, Howard H..
 127. "Temperature-dependent optical memory for dicyano Ag(I) complexes," 234th ACS National Meeting, Boston, MA, United States, August 19-23, 2007, Lu, Haiyan; Hurley, Sheila; Li, Xiaobo; Rawashdeh-Omary, Manal A.; Patterson, Howard H.; Omary, Mohammad A..
 128. "Optical memory application for nanoclusters of dicyanocuprate(I) ions doped in alkali halide crystals," 234th ACS National Meeting, Boston, MA, United States, August 19-23, 2007, Lu, Haiyan; Li, Xiaobo; Yson, Renante; Gomez, Robert S..
 129. "Photocatalytic activity of zeolite-supported Ag and AgFe nanoclusters," 234th ACS National Meeting, Boston, MA, United States, August 19-23, 2007, Gomez, Robert S.; Lu, Haiyan; Yson, Renante; Patterson, Howard H..

130. "Excited state energy transfer in d10-d8 mixed-metal donor systems with rare earth acceptor ions," 234th ACS National Meeting, Boston, MA, United States, August 19-23, 2007, Yson, Renante; Lu, Haiyan; Nicholas, Aaron; Patterson, Howard H..
131. "Protecting drinking water: The use of phytoplankton as a biosensor," 234th ACS National Meeting, Boston, MA, United States, August 19-23, 2007, Pinto, Jamie L.; Patterson, Howard H.; Peckenham, John M..
132. "Optical memory studies of bis(thiocyanato)aurate(I) complexes," 236th ACS National Meeting, Philadelphia, PA, United States, August 17-21, 2008, Arvapally, Ravi K.; Lu, Haiyan; Omary, Mohammad A.; Patterson, Howard H..
133. "Photophysical and photochemical properties of new tunable luminescent nanosystems with d10 and d8 electronic configurations of metal-metal bonded exciplexes," 236th ACS National Meeting, Philadelphia, PA, United States, August 17-21, 2008, Patterson, Howard H.; Li, Xiaobo; Palla, Veladri; Lu, Haiyan; Yson, Renante.
134. "Green chemistry technique using algae fluorescence to monitor water quality," 236th ACS National Meeting, Philadelphia, PA, United States, August 17-21, 2008, Wang, Qiong; Patterson, Howard H.; Peckenham, John M..
135. "Luminescence of Heterogeneous Nanoclusters Containing d8 and d10 Ions with Energy Transfer to Tb³⁺ Lanthanide Acceptor Ions In Aqueous Solution," 37th Northeast Regional Meeting of the American Chemical Society, Burlington, VT, United States, June 29-July 2 (2008), Guo, Zhonghua; Welch, David; Christian, Shaun; Cookson, Nathan; Patterson, Howard H..
136. "The Oxidation of Carbon Monoxide In Hydrogen by Zeolite-Supported Photocatalysts," 37th Northeast Regional Meeting of the American Chemical Society, Burlington, VT, United States, June 29-July 2 (2008), Gomez, Robert; Patterson, Howard H..
137. "Determining Treatment Effects of Copper Sulfate and Carbaryl on *Ankistrodesmus Falcatus* Fluorescence Chlorophyll Chemistry," 37th Northeast Regional Meeting of the American Chemical Society, Burlington, VT, United States, June 29-July 2 (2008), Pinto, Jamie L.; Roesler, Collin S.; Patterson, Howard H..
138. "Photophysical and photochemical investigations of new tunable luminescent metal-metal bonded d8-d10 exciplex nanoclusters doped in alkali halides," 238th ACS National Meeting, Washington, DC, United States, August 16-20, 2009, Baril-Robert, Francois; Li, Xiaobo; Laroche, Christie L.; Welch, David; Patterson, Howard H..

139. "Luminescence studies of "exciplex tuning" for nanoclusters of dicyanoargentate(I) ions doped in different alkali halides," 238th ACS National Meeting, Washington, DC, United States, August 16-20, 2009, Patterson, Howard H.; Baril-Robert, Francois; Larochelle, Christie L.; Li, Xiaobo; Welch, David.
140. "Luminescent detection of amines and imines using copper(I) cyanide," 238th ACS National Meeting, Washington, DC, United States, August 16-20, 2009, Pike, Robert D.; Ley, Amanda N.; Jones, James S.; Dunaway, Lars E.; Dembo, Matthew D.; Bayse, Craig A.; Baril-Robert, Francois; Patterson, Howard H..
141. "Structural host effects on the nature of mixed-metal interactions in nanoclusters of dicyanoargentate(I) and dicyanoaurate(I) ions doped in different alkali halides," 240th ACS National Meeting, Boston, MA, United States, August 22-26, 2010, Patterson, Howard H.; Welch, David A.; Baril-Robert, Francois; Li, Xiaobo.
142. "Nanoclusters of dicyanocuprate (I) ions doped in different alkali halides," 240th ACS National Meeting, Boston, MA, United States, August 22-26, 2010, Li, Xiaobo; Welch, David A.; Baril-Robert, Francois; Patterson, Howard H..
143. "Spectroscopic study of heterometallic d8-d10 and d10-d10 exciplex nanoclusters doped in alkali halide single crystals," 240th ACS National Meeting, Boston, MA, United States, August 22-26, 2010, Patterson, Howard H.; Baril-Robert, Francois; Li, Xiaobo; Welch, David A.; Larochelle, Christie L.
144. "Luminescent nitrogen and sulfur adducts of copper(I) salts," 240th ACS National Meeting, Boston, MA, United States, August 22-26, 2010, Pike, Robert D.; McCullough, Shannon M.; Safko, Jason P.; Dunaway, Lars E.; Dembo, Matthew D.; Patterson, Howard H..
145. "Structure diversity and photoluminescence in CuI-tetrahydrothiophene complexes," 248th ACS National Meeting presentation. Division of Inorganic Chemistry (San Francisco) August 2014. Pike, Robert; Henline, Kylie; Ahern, John C.; Kerr, Andrew; Wang, Charles; Sousa, Bryer; Patterson, Howard; Cahill, Christopher. (presentation contributor)
146. "Characterization of BiOX Compounds as Photocatalysts for the Degradation of Pharmaceuticals in Water," 249th ACS National Meeting presentation. Division of Inorganic Chemistry (Denver) March 2015. (Accepted) Ahern, John C; Fairchild, Rebecca, Sun, Jin-S; Carr, Jordan; Patterson, Howard H.