

Keith Andrew Walters

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Education

University of Florida	Ph.D. (GPA: 4.00)	Chemistry (Inorganic) 2000
Furman University	B.S. (Magna cum Laude, GPA: 3.82)	ACS Chem. 1996
Tuscola High School	Valedictorian (GPA: 4.00+)	1993

Professional and Honorary Societies

Phi Beta Kappa.

Furman University (Beta of South Carolina) Chapter, Inducted 1996.

American Chemical Society

Inorganic, Physical, and Chemical Education Divisions, 1993 – present.

Interamerican Photochemical Society

1996 – present.

Professional Experience

Assistant Professor of Inorganic & Physical Chemistry

Department of Chemistry, Northern Kentucky University. August 2002 – present.

Duties include supervising undergraduate research, teaching undergraduate chemistry courses and assisting in departmental development.

Postdoctoral Research Associate (Mentor: Professor J. T. Hupp)

Department of Chemistry, Northwestern University. August 2000 – July 2002.

Duties included spectroscopic research of inorganic materials, mentoring of graduate students, and spectroscopic instrument design and construction.

Graduate Research and Teaching Assistant (Mentor: Professor K. S. Schanze)

Department of Chemistry, University of Florida. August 1996 – July 2000.

Duties included organic and inorganic photochemistry research, computer maintenance, and spectroscopic instrument design and construction.

Ph.D. Dissertation: “Photophysical Studies of π -Conjugated Oligomers and Polymers that Incorporate Inorganic MLCT Chromophores.” Taught second-term general chemistry laboratory (descriptive inorganic chemistry).

Undergraduate Research and Teaching Assistant (Mentor: Prof. N.A.P. Kane-Maguire)
Department of Chemistry, Furman University. March 1995 – June 1996.
Duties included inorganic photochemistry research, computer software design, and spectroscopic instrument maintenance.
Senior Thesis: “Photophysics of Tungsten(0) Isocyanide Complexes.” Taught inorganic synthesis and organic spectroscopy laboratory courses.

Awards

Outstanding Junior Faculty Member.

Awarded by the College of Arts and Sciences, Northern Kentucky University, 2007.

Nutter Dissertation Fellowship.

Awarded by the College of Liberal Arts and Sciences, University of Florida, 2000.

Jones Creativity Award.

Awarded by the Department of Chemistry, University of Florida, 1999.

Drago Graduate Research Award.

Awarded by the Inorganic Division, Department of Chemistry, University of Florida, 1999.

Research Affiliates Presentation Award (First Place).

Awarded by the Research Affiliates of the Department of Chemistry, University of Florida, 1998.

Grinter Fellowship.

Awarded by the Department of Chemistry, University of Florida, 1996 – 1998.

American Chemical Society Outstanding Senior Award.

Awarded by the Department of Chemistry, Furman University, 1996.

Furman Advantage Research Fellowship.

Awarded by Furman University, 1995.

Duke Scholar Scholarship.

Awarded by Furman University, 1993 – 1996.

Outstanding Math and Science Student.

Awarded by Tuscola High School, 1993.

Departmental and Discipline Service

Chair, Faculty Search Committee

Fall 2007.

Directed a search for a physical chemistry position.

Chair, Faculty Search Committee

Fall 2006.

Directed a search for an open position with 165 applicants.

CHE 102 Committee

Fall 2004 – Fall 2005.

Assisted in revamping the curriculum for the NKU preparatory course and wrote a common final exam for the course.

Faculty Search Committee

Fall 2004.

Assisted in search for a scientific computationalist position.

Senior Faculty Advisor, Student Affiliates of the American Chemical Society

Fall 2003 – Present.

Assisted chapter in National Chemistry Week activities, organizing the departmental seminar program, and other service activities. Successfully obtained a charter for a Gamma Sigma Epsilon Chemistry Honor Society chapter. Maintained chapter website.

Faculty Search Committee

Fall 2003.

Assisted in search for an analytical chemist position.

General Chemistry Webmaster

Fall 2003 – Present.

Maintained website and created electronic versions of the lab manual report pages.

Department Chair Search Committee

Spring 2003.

Assisted in selecting a new departmental chair

University Service

Program Review Steering Committee

Fall 2007 – Present.

Served as faculty senate representative.

Faculty Senate

Fall 2006 – Present.

Served as departmental representative.

Faculty Senate Curriculum Committee

Fall 2005 – Present.

Assisted in significant curricular changes in the chemistry department and other scientific disciplines at the college and university levels.

Faculty Senate Budget Committee

Fall 2003 – Spring 2005.

Assisted in yearly evaluation of faculty budget priorities.

Research Funding

“Drug Delivery to the Brain Using Novel Nanomaterials”

Research Grant awarded by the Kentucky Biomedical Research Infrastructure Network (KBRIN-AREA), co PI with two other NKU faculty, \$29,700 (6/07-5/09).

“Synthesis and Characterization of Transition Metal Complexes with Annulene Caps and Spacers”

Research Grant awarded by the Northern Kentucky University Center for Integrative Natural Science and Mathematics, co PI with one other NKU faculty, \$3,624 (1/07-12/07).

“Continued Research on the Photobehavior of W(0) Isocyanides and their Application as Excited-State Reducing Agents”

Research Grant awarded by the Northern Kentucky University Center for Integrative Natural Science and Mathematics, \$12,000 (1/07-12/07).

“Acquisition of a Langmuir-Blodgett Instrument for Chemistry Research and Education”
Instrumentation Grant awarded by the National Science Foundation (NSF-MRI), Lead PI with three other NKU faculty, \$25,500 (8/06-7/09).

“Tethered Bipyridine Ligands for Transition Metal Incorporation in π -Conjugated Supramolecular Systems”

Research Grant awarded by the Northern Kentucky University Center for Integrative Natural Science and Mathematics, \$10,837 (1/06-12/06).

“Photobehavior of W(0) Isocyanides and their Application as Excited-State Reducing Agents”

Research Grant awarded by the Northern Kentucky University Center for Integrative Natural Science and Mathematics, \$10,837 (1/06-12/06).

“Characterization of the Fundamental Interactions of Dendrimer Nanostructures at the Solid/Solution Interface using Scanning Probe Microscopy”

Research Grant awarded by the Northern Kentucky University Center for Integrative Natural Science and Mathematics, co-PI with two other NKU faculty, \$14,231 (1/06-12/06).

“Acquisition of a Scanning Probe Microscope for Undergraduate Materials Research and Education”

Instrumentation Grant awarded by the National Science Foundation (NSF-DMR), co-PI with two other NKU faculty, \$217,546 (9/05-8/08).

“Acquisition of a Carbon-Hydrogen-Nitrogen-Sulfur Element Analyzer”

Instrumentation Grant awarded by the National Science Foundation (NSF-MRI), co-PI with four other NKU faculty, \$67,558 (7/05-6/06).

“Preparation of Second-Generation Fullerene-Transition Metal Bridges for Supramolecular Systems”

Research Grant awarded by the Northern Kentucky University Center for Integrative Natural Science and Mathematics, \$10,000 (6/04-5/05).

“Novel Supramolecular Charge Transfer Devices for Photophysical Energy Conversion and Transport”

R&D Excellence Grant awarded by the Kentucky Science and Engineering Foundation, \$44,669 (7/03-8/05).

“Fullerene-Containing Supramolecular Systems for Charge-Transfer Applications”

Research Grant awarded by the Northern Kentucky University Center for Integrative Natural Science and Mathematics, \$10,560 (6/03-5/04).

“Research and Education through the Photophysical Investigation of Photoinduced Charge Transfer Processes in Supramolecular Systems”

Faculty Start-Up Grant for Undergraduate Institutions awarded by The Camille and Henry Dreyfus Foundation, \$20,000 (7/02-6/07). Only nine grants awarded nationally.

Research Interests

- Photochemistry and photophysics of transition metal complexes
- Photothermal chemistry of organic and inorganic molecules
- Supramolecular photochemistry
- Electron and energy transfer processes in organometallic systems

- Determination of ground and excited state dipole moments
- Spectroscopic instrument and control software design.

Research Students (* = NKU Greaves Scholar; # = NKU SURGC Recipient)

1. Katherine Cilwa, Summer 2003 (B.S., Coastal Carolina Univ. 2003, Ph. D. student, Ohio State Univ.).
2. C. Heather McMillen[#], Spring 2003–Spring 2004 (B.S., NKU 2005, Ph. D. student, Vanderbilt Univ.).
3. Sarah A. Nelson(Beetem)^{*,#}, Summer 2003–Fall 2005 (B.S., NKU 2005, Process Chemist, Proctor & Gamble, Cincinnati, OH).
4. Eric Weinberg, Spring 2004 (NKU Undergraduate).
5. Amber Shiveley, Summer 2004 (B.S., NKU 2004, Ph. D. student, Univ. of Cincinnati).
6. Nira Moore, Summer 2004 (Chemist, Proctor & Gamble, Cincinnati, OH).
7. Krystle Kinman, Summer 2004 (B.S., U of L 2005, QC chemist, Superior Solvents and Chemicals, Louisville, KY).
8. Abed Refai, Summer 2004 (NKU Undergraduate).
9. Paul Hannah, Summer 2004 (NKU Undergraduate).
10. Nicole King, Fall 2004–Spring 2005 (NKU Undergraduate)
11. Kelly Lawson-Ferguson^{*}, Spring 2005–Summer 2005 (Instructor, Southwestern College, Cincinnati, OH).
12. Joel Deye^{*,#}, Summer 2005–present (NKU Undergraduate).
13. Tiffany Tanner, Summer 2005 (Research assistant, Children's Hospital, Cincinnati, OH).
14. Stacy Conrad[#], Summer 2005–Spring 2006 (Pharmacy student, Univ. of Cincinnati).
15. Ron Moore, Summer 2005 (NKU Undergraduate).
16. Laurel Farmer, Summer 2005 (CMU Undergraduate).
17. James Kareth, Fall 2005–Spring 2006 (Ph. D. student, Univ. of Indiana).
18. Celeste Morris[#], Spring 2005–present (NKU Undergraduate).
19. Rebecca Seger[#], Fall 2005–Summer 2007 (NKU Undergraduate).
20. Sean Goins, Summer 2006–Spring 2007 (NKU Undergraduate).
21. Lindsay Whitehead, Summer 2006 (NKU Undergraduate).
22. Craig Girten^{*}, Summer 2006–present (NKU Undergraduate, co-supervised by Heather Bullen).
23. Jody Farmer, Summer 2006 (NKU Undergraduate, co-supervised by Heather Bullen).
24. Danielle Mazor, Fall 2006–present (NKU Undergraduate).

25. Jessica Baumann, Summer 2007–present (NKU Undergraduate).
26. Lauren Rizzo, Summer 2007 (NKU Post-Bac).
27. Stephanie Kramer, Fall 2007–present (NKU Undergraduate).
28. Phil Zaring, Fall 2007–present (NKU Undergraduate).

Invited Research Seminars

1. “Determination of Excited State Energetics with Photothermal Techniques,” American Chemical Society Florida Section Conference, Orlando, FL, May 1998.
2. “Photophysical Investigations of π -Conjugated Oligomers and Unique Photothermal Techniques for Excited-State Photochemical Study,” Furman University, Greenville, SC, October 1999.

Contributed Research Papers (* Indicates Undergraduate Student)

1. K. A. Walters; L. Tolley; N. A. P. Kane-Maguire “Photophysics of Tungsten(0) Isocyanide Complexes,” ACS Southeast-Southwest Regional Conference, Memphis, TN, October 1995.
2. K. A. Walters; L. Tolley; N. A. P. Kane-Maguire “Photophysics of Tungsten(0) Isocyanide Complexes,” National Council for Undergraduate Research National Conference, Asheville, NC, May 1996.
3. K. D. Ley; K. A. Walters; K. S. Schanze “Photophysics of Metal-Organic π -Conjugated Oligomers and Polymers,” International Conference on Science and Technology of Synthetic Metals, Montpellier, France, June 1998.
4. K. A. Walters; K. S. Schanze “Determination of (2,2'-bipyridyl)Rhenium Triplet Excited-State Energies with Laser-Induced Optoacoustic Spectroscopy,” ACS National Conference, Boston, MA, August 1998.
5. K. S. Schanze; K. D. Ley; K. A. Walters “Photophysics of Metal-Organic π -Conjugated Oligomers and Polymers,” ACS National Conference, Boston, MA, August 1998.
6. K. A. Walters; K. D. Ley; Y. Li; K. S. Schanze “Photophysics of π -Conjugated Oligomers that Incorporate Inorganic MLCT Chromophores,” 13th International Symposium on Photochemistry and Photophysics of Coordination Compounds, Lipari, Italy, June 1999.
7. K. A. Walters; K. D. Ley; Y. Li; K. S. Schanze “Photophysics of Aryleneethynylene π -Conjugated Oligomers Incorporating MLCT Chromophores,” ACS National Conference, New Orleans, LA, August 1999.
8. K. A. Walters; K. D. Ley; Y. Li; K. S. Schanze “Photophysics of π -Conjugated Oligomers that Incorporate Inorganic MLCT Chromophores,” Inter-American Photochemical Society Winter Conference, Clearwater Beach, FL, January 2000.

9. K. A. Walters; J. T. Hupp “Measurement of Charge-Transfer Distances in Inorganic Chromophores with Stark Spectroscopy and Transient DC Photoconductivity,” 14th International Symposium on Photochemistry and Photophysics of Coordination Compounds, Veszprém, Hungary, July 2001.
10. K. A. Walters; J. T. Hupp “Spectroscopic Determination of Charge-Transfer Distances in Inorganic Chromophores,” ACS National Conference, Chicago, IL, August 2001.
11. C. H. McMillen*; K. A. Walters “Synthesis of a New Fullerene/Transition Metal Bridge: Implications of Rigidity and Conjugation,” 4th Annual Ohio Inorganic Weekend, November 2003.
12. S. A. Beetem*; K. A. Walters “Synthesis of a Linear Multimetallic Chain Using Tethered Phenanthroline Ligands,” 4th Annual Ohio Inorganic Weekend, November 2003.
13. C. H. McMillen*; K. A. Walters “Synthesis of a New Fullerene/Transition Metal Bridge for Charge Transfer Applications,” ACS National Conference, Anaheim, CA, March 2004. [Also presented at the NKU Celebration of Research and Creativity, Highland Heights, KY, April 2004.]
14. S. A. Beetem*; K. Cilwa; K. A. Walters “Synthesis of a New Ligand to Facilitate Multi-Metallic Chains,” ACS National Conference, Anaheim, CA, March 2004. [Also presented at the NKU Celebration of Research and Creativity, Highland Heights, KY, April 2004.]
15. S. A. Beetem*; K. A. Walters “Synthesis of a New Ligand to Facilitate Multi-metallic Chains,” Kentucky Academy of Science Annual Meeting, Murray, KY, November 2004. [Won first place in the physical sciences poster competition.]
16. N. King*; A. Shiveley*; N. Moore*; K. A. Walters “Synthesis of a Fullerene/Transition Metal Supramolecular System,” Kentucky Academy of Science Annual Meeting, Murray, KY, November 2004.
17. S. A. Beetem*; K. Kinman*; K. A. Walters “Synthesis of a New Ligand to Facilitate Multi-metallic Chains,” Posters at the Capitol, Frankfort, KY, February 2005.
18. N. King*; A. Shiveley*; N. Moore*; K. A. Walters “Synthesis of a Fullerene/Transition Metal Supramolecular System,” Posters at the Capitol, Frankfort, KY, February 2005.
19. S. A. Beetem*; K. Kinman*; K. A. Walters “Continued Synthesis of a New Ligand to Facilitate Multi-metallic Chains,” ACS National Conference, San Diego, CA, March 2005. [Also presented at the NKU Celebration of Research and Creativity, Highland Heights, KY, April 2005.]
20. N. King*; A. Shiveley*; N. Moore*; K. A. Walters “Continued Synthesis of a Fullerene/Transition Metal Supramolecular System,” ACS National Conference, San Diego, CA, March 2005. [Also presented at the NKU Celebration of Research and Creativity, Highland Heights, KY, April 2005.]
21. M. E. Wiggers*; S. A. Beetem*; E. Ferraris*; S. Stamper*; K. A. Walters “2004 NCW Demonstrations Presented by the NKU Student Affiliates,” ACS National Conference, San Diego, CA, March 2005.

22. S. A. Beetem*; N. L. King*; A. Shiveley*; K. Kinman*; K. A. Walters “New Building Blocks for Supramolecular Photochemistry,” 16th International Symposium on Photochemistry and Photophysics of Coordination Compounds, Pacific Grove, CA, July 2005.
23. S. M. Conrad*; S. A. Beetem*; K. J. Lawson-Ferguson*; K. A. Walters “Synthesis of a New Ligand for Linear Multi-Metallic Chains,” Merck/AAAS Interdisciplinary Summer Research Celebration, Highland Heights, KY, September 2005. [Also presented at the Kentucky Academy of Science Annual Meeting, Richmond, KY, November 2005]
24. J. Deye*; T. Tanner*; N. L. King*; A. Shiveley*; K. A. Walters “Continued Synthesis of a Fullerene-Bipyridine Ligand for Photoelectric Applications,” Merck/AAAS Interdisciplinary Summer Research Celebration, Highland Heights, KY, September 2005. [Also presented at the Kentucky Academy of Science Annual Meeting, Richmond, KY, November 2005]
25. J. Deye*; T. Tanner*; A. Shiveley*; K. A. Walters “Continued Synthesis of a Fullerene-Bipyridine Ligand for Photoelectric Applications,” Posters at the Capitol, Frankfort, KY, February 2006.
26. S. M. Conrad*; S. A. Beetem*; K. J. Lawson-Ferguson*; K. A. Walters “Synthesis of a New Ligand for Linear Multi-Metallic Chains,” ACS National Conference, Atlanta, GA, March 2006. [Also presented at the NKU Celebration of Research and Creativity, Highland Heights, KY, April 2006.]
27. J. Deye*; T. Tanner*; N. L. King*; A. Shiveley*; K. A. Walters “Continued Synthesis of a Fullerene-Bipyridine Ligand for Photoelectric Applications,” ACS National Conference, Atlanta, GA, March 2006. [Also presented at the NKU Celebration of Research and Creativity, Highland Heights, KY, April 2006.]
28. H. J. Gulley*; D. Downing*; M. Lauer*; H. A. Bullen; K. A. Walters “Key to a Successful SAACS Chapter at Northern Kentucky University: Outreach,” ACS National Conference, Atlanta, GA, March 2006.
29. K. A. Walters “Teaching the History of Chemistry as a Study Abroad Course in Great Britain,” ACS National Conference, Atlanta, GA, March 2006. [Also presented at the 19th Biennial Conference on Chemical Education, West Lafayette, IN, July 2006.]
30. H. A. Bullen; K. A. Walters “Balancing the ‘Triad’ at NKU: Perspectives from ‘Novice Optimist’ and ‘Seasoned Realist’ Junior Faculty,” ACS National Conference, Atlanta, GA, March 2006.
31. C. Morris*; K. A. Walters “Developments in Fullerene-Transition Metal Supramolecular System Design and Synthesis,” NKU Celebration of Research and Creativity, Highland Heights, KY, April 2006.
32. R. Seger*; K. A. Walters “Synthesis of a New Isocyanide Ligand for Efficient Photoinduced Charge Transfer Processes Within an Octahedral W(0) Compound,” NKU Celebration of Research and Creativity, Highland Heights, KY, April 2006.
33. J. Kareth; K. A. Walters “Synthesis of Asymmetric Fullerene Bipyridine Transition Metal Complex,” NKU Celebration of Research and Creativity, Highland Heights, KY, April 2006.

34. K. A. Walters “Evolution of the NKU ‘Modern’ Upperclass Inorganic Chemistry Course,” 19th Biennial Conference on Chemical Education, West Lafayette, IN, July 2006.
35. K. A. Walters “Using Polling Systems in General Chemistry: Do You Get it Yet?,” 19th Biennial Conference on Chemical Education, West Lafayette, IN, July 2006.
36. J. Deye*; K. A. Walters “Synthesis of a Novel Fullerene-Bipyridine Ligand for Photoelectric Applications,” Merck/AAAS Interdisciplinary Summer Research Celebration, Highland Heights, KY, September 2006.
37. S. Goins*; C. Morris*; S. M. Conrad*; T. Tanner*; K. A. Walters “The Molecular Wire Concept and Development,” Merck/AAAS Interdisciplinary Summer Research Celebration, Highland Heights, KY, September 2006. [Also presented at the Kentucky Academy of Science Annual Meeting, Morehead, KY, November 2006 and Posters at the Capitol, Frankfort, KY, February 2007.]
38. C. D. Girten*; J. R. Helton*; K. A. Walters; H. A. Bullen “Surface Modification of G4 and G5 PAMAM Dendrimers,” Merck/AAAS Interdisciplinary Summer Research Celebration, Highland Heights, KY, September 2006. [Also presented at the Kentucky Academy of Science Annual Meeting, Morehead, KY, November 2006.]
39. R. A. Seger*; L. Whitehead*; K. A. Walters “Continued Synthesis of a New Isocyanide Ligand for Efficient Photoinduced Charge Transfer Processes Within an Octahedral W(0) Compound,” Merck/AAAS Interdisciplinary Summer Research Celebration, Highland Heights, KY, September 2006.
40. K. A. Walters “Wikis, Podcasts, and Screencasts (oh my!) in Undergraduate Chemistry Coursework and Research,” ACS National Conference, Chicago, IL, March 2007.
41. H. A. Bullen; K. A. Walters “Development of a Nanomaterials One Week Intersession Course at NKU,” ACS National Conference, Chicago, IL, March 2007.
42. J. R. Deye*; R. A. Wilson*; M. Lauer*; R. A. Seger*; C. A. Morris*; H. A. Bullen; K. A. Walters “New Methods of Membership Recruitment for SAACS at Northern Kentucky University,” ACS National Conference, Chicago, IL, March 2007.
43. J. R. Deye*; K. A. Walters “Synthesis of a Novel Fullerene-Bipyridine Ligand for Photoelectric Applications,” ACS National Conference, Chicago, IL, March 2007. [Also presented at the NKU Celebration of Research and Creativity, Highland Heights, KY, April 2007, and 39th Central ACS Regional Meeting, Covington, KY, May 2007.]
44. C. A. Morris*; K. A. Walters “Developments in Fullerene-Transition Metal Supramolecular Systems and Molecular Wire Precursors,” ACS National Conference, Chicago, IL, March 2007. [Also presented at the NKU Celebration of Research and Creativity, Highland Heights, KY, April 2007, and 39th Central ACS Regional Meeting, Covington, KY, May 2007.]
45. R. A. Seger*; K. A. Walters “Synthesis of a New Isocyanide Ligand for Efficient Photoinduced Charge Transfer Processes Within an Octahedral W(0) Compound,” ACS National Conference, Chicago, IL, March 2007. [Also presented at the NKU Celebration of Research and Creativity, Highland Heights, KY, April 2007, and 39th Central ACS Regional Meeting, Covington, KY, May 2007.]

46. S. M. Goins*; K. A. Walters “Continued Synthesis of Symmetric and Asymmetric Ligation Points for Organometallic Supramolecular Systems,” ACS National Conference, Chicago, IL, March 2007. [Also presented at the NKU Celebration of Research and Creativity, Highland Heights, KY, April 2007.]
47. C. D. Girten*; J. R. Helton*; D. A. Tomalia; K. H. Martines; H. A. Bullen; K. A. Walters “Surface Modification of G4 and G5 PAMAM Dendrimers,” ACS National Conference, Chicago, IL, March 2007. [Also presented at the NKU Celebration of Research and Creativity, Highland Heights, KY, April 2007, and 39th Central ACS Regional Meeting, Covington, KY, May 2007.]
48. J. D. Hogan*; T. Fabre*; K. A. Walters; K. H. Martines; D. A. Tomalia; H. A. Bullen “ATR-FTIR Analysis of the Interaction of Biotinylated Dendrimers with Blood Brain Barrier Models,” ACS National Conference, Chicago, IL, March 2007. [Also presented at the NKU Celebration of Research and Creativity, Highland Heights, KY, April 2007.]
49. J. Baumann*; C. A. Morris*; K. A. Walters “The Molecular Wire Concept Continued,” Merck/AAAS and KBRIN Interdisciplinary Summer Research Celebration, Highland Heights, KY, August 2007.
50. C. Girten*; K. A. Walters “Surface Modification of PAMAM Dendrimers for Drug Delivery,” Merck/AAAS and KBRIN Interdisciplinary Summer Research Celebration, Highland Heights, KY, August 2007.
51. L. Rizzo*; J. R. Deye*; K. A. Walters “Synthesis of a Novel Fullerene-Bipyridine Ligand for Photoelectric Applications,” Merck/AAAS and KBRIN Interdisciplinary Summer Research Celebration, Highland Heights, KY, August 2007.
52. R. A. Seger*; D. Mazor*; K. A. Walters “Continued Synthesis of a New Isocyanide Ligand for Efficient Photo-Induced Charge Transfer Processes Within an Octahedral W(0) Compound,” Merck/AAAS and KBRIN Interdisciplinary Summer Research Celebration, Highland Heights, KY, August 2007.

Refereed Publications (* Indicates Undergraduate Student)

1. K. S. Schanze; L. A. Lucia; M. Cooper; K. A. Walters; H. F. Ji; O. Sabina “Intramolecular Energy Transfer to *trans*-Stilbene,” *J. Phys. Chem. A* **1998**, *102*, 5577-5584.
2. K. A. Walters; K. D. Ley; K. S. Schanze “Triplet State Photophysics in an Aryleneethynylene π -Conjugated Polymer,” *Chem. Commun.* **1998**, 1115-1116.
3. K. D. Ley; K. A. Walters; K. S. Schanze “Photophysics of Metal-Organic π -Conjugated Oligomers and Polymers,” *Synth. Met.* **1999**, *102*, 1585-1586.
4. K. A. Walters; K. D. Ley; K. S. Schanze “Photophysical Consequences of Conformation and Aggregation in Dilute Solutions of π -Conjugated Oligomers,” *Langmuir* **1999**, *15*, 5676-5680.

5. Y. Shen; K. A. Walters; K. Abboud; K. S. Schanze "Intramolecular Charge Transfer in Pyridinium-Substituted Ru-Polypyridine Complexes," *Inorg. Chim. Acta* **2000**, *300*, 414-426.
6. K. A. Van Houten; K. A. Walters; K. S. Schanze; R. S. Pilato "Study of the Heterocyclic-Substituted Platinum-1,2-enedithiolate ³ILCT Excited States by Transient Absorption Spectroscopy," *J. Fluor.* **2000**, *10*, 35-40.
7. K. A. Walters; L. Trouillet; S. Guillerez; K. S. Schanze "Photophysics and Electron Transfer in poly-(3-Octylthiophene) Alternating with Ru(II) and Os(II) Bipyridine Complexes," *Inorg. Chem.* **2000**, *39*, 5496-5509.
8. Y. Li; K. A. Walters; K. D. Ley; K. S. Schanze "Photophysics of Metal-Containing Phenylene Ethynylene Oligomers," *Pure Appl. Chem.* **2001**, *73*, 497-501.
9. K. A. Walters; L. L. Premvardhan; L. A. Peteanu; K. S. Schanze "Metal-to-Ligand Charge Transfer Absorption in a Rhenium(I) Complex that Contains a π -Conjugated Bipyridine Acceptor Ligand," *Chem. Phys. Lett.* **2001**, *339*, 255-262.
10. K. A. Walters; K. D. Ley; C. S. P. Cavalaheiro; S. E. Miller; D. Gosztola; M. R. Wasielewski; A. P. Bussandri; H. van Willigen; K. S. Schanze "Photophysics of π -Conjugated Metal-Organic Oligomers. Phenyleneethynylenes that Contain the (bpy)Re(CO)₃Cl Chromophore," *J. Am. Chem. Soc.* **2001**, *123*, 8329-8342.
11. K. A. Walters; D. M. Dattelbaum; K. D. Ley; J. R. Schoonover; T. J. Meyer; K. S. Schanze "Photophysics of Phenyleneethynylene Metal-Organic Oligomers. Probing the Lowest Excited State by Time-Resolved IR Spectroscopy," *Chem. Commun.*, **2001**, 1834-1835.
12. K. A. Walters; Y. J. Kim; J. T. Hupp "Experimental Studies of Charge Transfer and Charge Redistribution in (X₂-bipyridine)Re^I(CO)₃Cl Complexes," *Inorg. Chem.*, **2002**, *41*, 2909-2919.
13. K. A. Walters; D. A. Gaal; J. T. Hupp "Stark Emission Measurements on Interfacial Charge Transfer in Dye-Sensitized Semiconductor Colloids," *J. Phys. Chem. B*, **2002**, *106*, 5139-5142.
14. Y. Li; C. E. Whittle; K. A. Walters; K. D. Ley; K. S. Schanze "Metal-to-Ligand Charge Transfer Excited States in π -Conjugated Systems," *MRS Symposium Series*, **2002**, *665*, 61-72.
15. K. D. Benkstein; C. H. Stern; K. E. Splan; R. C. Johnson; K. A. Walters; F. W. M. Vanhelsmont; J. T. Hupp "Collapsed Molecular Rectangles based on Rhenium(I) Coordination of Ethynylpyridyl Porphyrins. Synthesis, Structure, and Bending-Induced Charge-Transfer Behavior," *Eur. J. Inorg. Chem.*, **2002**, 2818-2822.
16. K. E. Splan; M. H. Keefe; A. M. Massari; K. A. Walters; J. T. Hupp "Synthesis, Characterization, and Preliminary Intramolecular Energy Transfer Studies of Rigid, Emissive, Rhenium-linked Porphyrin Dimers," *Inorg. Chem.*, **2002**, *41*, 619-621.
17. K. A. Walters; Y. J. Kim; J. T. Hupp "Manipulation of the Distance of Light-Induced Electron Transfer Within a Semi-Rigid Donor(Amine)/Acceptor(Terpyridine) Assembly

via Complexation of Di-positive and Tri-positive Metal Ions,” *J. Electroanal. Chem.*, **2003**, 554-555, 449-458.

18. J. H. Niewahner; K. A. Walters “Laboratory Instruction of an Experiment Using a Glove Box: Synthesis of Bis(1,2-dimethylimidazole)copper(I) hexafluorophosphate,” *J. Chem. Ed.*, **2007**, 84, 702-703.
19. J. H. Niewahner; K. A. Walters; A. Wagner* “Improved Synthesis of Geodken’s Macrocycle and the Synthesis of its Dichloride Salt,” *J. Chem. Ed.*, **2007**, 84, 477-479.
20. A. Zeveley*; K. A. Walters “New Systems Uniting Fullerenes with Transition Metal Centers,” *Current Organic Chem.*, in preparation (invited submission).
21. C. A. Cason*; S. A. Oehrle; T. A. Fabr e*; C. D. Girten*; K. A. Walters; D. A. Tomalia; K. H. Martines; H. A. Bullen “Improved Liquid Chromatographic Analysis of Poly(amidoamine) (PAMAM) Dendrimers: From High Performance (HPLC) to Ultra Performance (UPLC),” *J. Chrom. A.*, submitted.
22. M. G. Lauer*; J. W. Leslie*; A. Mynar*; S. A. Stamper*; A. D. Martinez*; A. J. Bray*; S. Negassi*; K. McDonald*; E. Ferraris*; A. Muzny*; S. McAvoy*; E. Wang; B. Nuez; C. Parish; K. A. Walters; K. C. Russell “Synthesis, Spectroscopy, and Theoretical Calculations for a Series of Push-Pull [14]-pyridoannulenes,” *J. Org. Chem.*, submitted.
23. J. R. Deye*; A. N. Shiveley*; S. A. Oehrle; K. A. Walters “Separation of Substituted Fullerenes using Normal-Phase HPLC-MS,” *J. Chrom. A*, submitted.
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25. J. R. Deye*; A. N. Shiveley*; S. M. Goins*; L. Rizzo*; S. A. Oehrle; K. A. Walters “Synthesis of a New Ligand for Transition-Metal Fullerene Supramolecular Systems,” *Inorg. Chem.*, submitted.

Non-Refereed Publications (* Indicates Undergraduate Student)

1. K. S. Schanze; K. A. Walters “Photoinduced Electron Transfer in Metal-Organic Dyads,” in *Molecular and Supramolecular Photochemistry*, V. Ramamurthy and K. S. Schanze (Editors), Marcel-Dekker: New York, 1998, Volume 2, 75-127.
2. K. A. Walters; K. S. Schanze “Determination of Triplet Energies in Rhenium Polypyridine Complexes with Laser-Induced Optoacoustic Spectroscopy,” *The Spectrum (The Newsletter of the Center for Photochemical Sciences, Bowling Green State University)* **1998**, 11, 1-9.
3. K. S. Schanze; K. A. Walters; Y. Li; K. D. Ley “Photophysics of Mono-Disperse π -Conjugated Metal-Organic Oligomers,” *Polymer Preprints* **2000**, 41, 427-428.
4. B. C. Tzeng; R. C. Bailey; X. Dang; G. A. Mines, K. A. Walters; J. T. Hupp “Photonic Lattices as Diffraction Based Chemical Sensors,” *Electrochemical Society Proceedings (Sensors Division)* **2001**, 18, 511-520.
5. K. A. Walters “Stark Spectroscopy,” in *Comprehensive Coordination Chemistry II*, T. J. Meyer and J. A. McCleverty (Editors), Elsevier, **2003**, Volume 2, 303-313.

6. J. R. Deye*; K. A. Walters “Photoluminescence and Electroluminescence, Solid State,” in *Application of Physical Methods to Inorganic and Bioinorganic Chemistry*, R. A. Scott and C. M. Lukehart (Editors), John Wiley & Sons, in press.