

# GERALD J. MEYER

Department of Chemistry  
University of North Carolina at Chapel Hill  
Chapel Hill NC

Murray Hall 2202B  
(919) 962-6320  
gjmeyer@email.unc.edu

## Education:

**Ph. D.** (1989) **University of Wisconsin at Madison**, Department of Chemistry with Professor Arthur B. Ellis

**B.S.** (1985) **State University of New York at Albany**, Departments of Chemistry and Mathematics

## Research Experience:

**Professor:** University of North Carolina at Chapel Hill, Department of Chemistry, (1/14 – present)  
Bernard N. Baker Professor of Chemistry Johns Hopkins University (7/09 –12/31/13)  
Chairman of Chemistry Johns Hopkins University (7/11 – 6/13)  
Johns Hopkins University, Department of Chemistry (7/00 – present)  
Johns Hopkins University, Department of Materials Science & Engineering (7/00 – present)

**Associate Professor:** Johns Hopkins University, Department of Chemistry (7/97 – 6/00)

**Assistant Professor:** Johns Hopkins University, Department of Chemistry (7/91 - 6/97)

**Postdoctoral Associate:** University of North Carolina at Chapel Hill with Thomas J. Meyer (10/89 - 6/91)

**Research Assistant:** University of Wisconsin-Madison (1/87 - 10/89)  
State University of New York at Albany (2/84 - 8/85)

## Memberships and Awards:

American Chemical Society	Langmuir Advisory Board (January 2001 – 2009)
Materials Research Society (1998-2008)	Inorganic Advisory Board Chemistry (January 2006-2008)
Electrochemical Society (1991- 2008)	Chemistry of Materials Advisory Board (January 2007 – 2013)
Kavli Frontiers of Science Junior Faculty	J. Phys. Chem. Advisory Board (September 2011 – present)
Inter-American Photochemical Society	Boy Scouts of America, Eagle Rank
Golden Key Honor Society	Carrier of the Year Award
3M Non-tenured Faculty Award	

## Research Group

### Current

**Graduate Students** (Total 7): Timothy Barr, Evan Beauvilliers, Erinn Brigham, Brian DiMarco, Ryan O'Donnell, Ke Hu, and William Ward.

**Undergraduate Students:** Jacqueline Heath

### Former

**Ph.D. Graduates:** (Total 32): Shane Ardo (2010), Laura A. Bauer (2004), Bryan Bergeron (2003), Nira S. Birenbaum (2005), Felix N. Castellano (1996), Chris Clark (2006), Darryn Achey (2013), Byron Farnum (2012), Fereshteh Farzhad (1999), Amanda Fond (2007), James Gardner (2008), George Hasselman (2000), Todd A. Heimer (1996), Gerard Higgins (2006), Paul Hoertz (2003), Tamae Ito (2006), Patrick Johanssen (2012), Minh C. Ko (1997), Feng Liu (2005), Andras Marton (2006), Amanda Morris (2009), Ping Qu (2001), Mark Ruthkosky (1998), Donald V. Scaltrito (2002), Aaron Staniszewski (2008), Jeremy M. Stipkala (1997), Jonathon Stromberg, (2007), Arnold Stux (2003), Atefeh Taheri (2013), Hailong Xia (2009), John Rowley (2011) and Mei Yang (2003).

**Post-Doctoral Associates** (Total 6): Maria Abrahamsson, Jovan Giamio, Craig Kelly, Sherine O'Bare, David Thompson, and David Watson.

**Undergraduates** (Total 26): Michael Balfour, Eugene Ceppa, Erica Dun, Arthur Esswein, Lee Friedman, Robert Freundlich, Joseph Gordonecker, Jeffrey Jou, Michelle Kim, David Klein, David Sambade, Taisei Kobayashi, Bert Lai, Kanini Mjuguna, John O'Callahan, Emily Orimilikwe, Timothy Park, Rachelle Pinlac, Ely Rothblatt, Andrea Sachs, Shin Shoj, Solito Sumulong, Michael Thandasetti, Griffon McCutcheon, and Mark Zaros.

## University Services

### **CRAEMS Center Director (2000-2007):**

Principle Investigator and director of an NSF Center for Collaborative Research Activities in Environmental Molecular Science (CRAEMS) entitled "Environmental Redox-Mediated Dehalogenation Chemistry."

### **Committees:**

Chemistry Department Colloquium Chair, 1995-96	Faculty Student Interaction Program Host 1994
Chemistry Department Graduate Admissions 1994-04	Consortium for Nanostructured Materials Participant
Chemistry Department Graduate Admissions Chair 1999-00	Dunning Hall Renovation Ad Hoc Committee
Chemistry Department Graduate Student Advising 1992-99	Hughes Undergraduate Summer Program, 1998
Chemistry Department Oral Exams 1993-06	NSF Engineering Research Center, DOGEE, 1995
Committee for a New EPR for Chemistry 1995, 1996	Search Committee for Inorganic Hopkins Faculty, 1997
Graduate Student Recruitment Committee Chair, 2000	Search Committee for Physical Hopkins Faculty, 1996
Faculty Committee on Pre-Medical Education, 2007- present	Meyerhoff Bridge Summer Program, 2004-2008

### **Courses Taught:**

- 030.101 *Introductory Chemistry I*, Fall 1997, 1999, 2000, 2005, 2006, 2007, 2008
- 030.112 *Introductory Chemistry with Problem Solving*, Fall 2013
- 030.356 *Advanced Inorganic Laboratory*, Spring 1992 -98
- 030.449 *Chemistry of Inorganic Compounds*, Fall 1993 – 1995, Spring 2010, Fall 2013
- 030.466 *Physical and Analytical Methods*, Fall 1996, 1998, 2006
- 030.611 *Electron Transfer*, Fall 1992, Spring 1999, 2001, 2009
- 030.688 *Physical Inorganic Methods*, Spring 2006, 2008

### **New Courses Developed:**

*Advanced Inorganic Laboratory*: Designed and offered for the first time in 1992. The lab has been offered every year since and is required by the American Chemical Society (ACS) for a certified degree. The ACS Committee on Professional Training reviewed and rated the lab course as excellent.

*Physical and Analytical Methods*: The objective is to teach the fundamental principles upon which modern analytical instrumentation is based. The course is designed for senior undergraduate and first year graduate students.

*Electron Transfer*: The ubiquitous and essential role electron transfer processes play in many physical, chemical, and biological processes is highlighted in this course. Basic theory, techniques, and literature examples and reviewed in this graduate level course.

*Physical Inorganic Methods*: This course provides fundamental examples of the kinds of information that can be obtained by applications of methods to inorganic chemistry. Topics covered include symmetry, group theory, spectroscopy, magnetism and ionization methods.

## Outside Services

**Associate Editor of ACS-Applied Materials & Interfaces, May 2012- present.**

### **Conference and Workshop Co-Organizer:**

1. "Photochemistry" Gordon Research Conference, Boston, MA, July 2011.
2. "Electron Donor-Acceptor Interactions" Gordon Research Conference, Newport RI, July 2010.
3. NSF Workshop on Sustainability and Chemistry, Arlington VA, May 30-June 1 2006.
4. XIVth Inter-American Photochemical Society (I-APS) Meeting, Clear Water Beach FL, January 2-5, 2003.

### **Symposium Co-Organizer:**

1. "Organic-Inorganic Photocells" 240<sup>th</sup> National A.C.S. Meeting, COLL Division, Boston MA, August 24-26, 2010.
2. "Science & Technology of Next Generation Photovoltaics" 232<sup>nd</sup> National A.C.S. Meeting, PMSE Division, San Francisco CA, September 10-12, 2006.
3. "Nanostructured Electronic and Photonic Materials" 200<sup>th</sup> Electrochem. Soc. Meeting, Philadelphia, PA, 2002.
4. "State of the Art: Semiconductor and Metal Nanoparticles for Light Energy Conversion" 222<sup>nd</sup> National A.C.S. Meeting, Chicago, IL, 2001.
5. "Nanostructured Materials in Electrochemistry" 187<sup>th</sup> Meeting of the Electrochemical Society, Reno, NV May 21-26, 1995.

### **Panel Review and Workshop Participant:**

1. "Catalysis for Energy" National Science Foundation (NSF), Arlington, VA, March 1-2, 2012.
2. "Germany-USA Conference on Energy and Climate Research" NSF, Arlington, VA, February 18, 2010.
3. "Molecular Solar Workshop", National Science Foundation, Estes Park, CO, September 4-9, 2007.
4. Solar Energy Technologies Program Review, Department of Energy, Denver CO November 6-9, 2005.
5. "Basic Research Needs for Solar Energy Utilization", Department of Energy, Bethesda MD, April 18-21, 2005.
6. Review of Notre Dame Radiation Laboratory, Notre Dame, IN April 17-19, 2002.
7. "Career Grants", National Science Foundation, Arlington, VA Oct 23-24, 2000.
8. "Small Business Innovative Research/Small Business Technology Transfer" NSF, Arlington, VA Sept. 14, 1999.
9. "Basic Research Opportunities in Photovoltaics" NREL, Seattle, WA May 3, 1999.
10. "Research Opportunities in Photochemical Sciences" Department of Energy, Estes Park, CO February 5-8, 1996.

### **Invited Presentations**

**National/Governmental Laboratories** (8 Total): Argonne National Laboratory, Argonne IL; Army Research Laboratory at Adelphi, MD; Brookhaven National Laboratory, Upton NY; Los Alamos National Laboratory, Los Alamos NM; National Institute of Standards, Gaithersburg MD; National Renewable Energy Laboratory, Golden CO; Office of Naval Research, Washington DC; and the US Naval Academy, Annapolis, MD.

**Industry** (8 Total): BP Solar, Taona VA; DuPont, Wilmington DE; GE Global Research, Schenectady NY; Pittsburg Paint & Glass, Pittsburg PA; Polysciences Inc., Warrington PA; Rohm & Haus, Philadelphia PA; 3M Company, St. Paul MN; and Watson Pharmaceuticals, Salt Lake City UT.

**US Universities and Colleges** (84 Total): Arizona State University, Tempe AZ; Auburn University, Auburn AL; Bloomsburg University, Bloomsburg PA; Bowdoin College, Brunswick, ME; Bowling Green State University, Bowling Green OH; Brigham Young University, Provo UT; California Institute of Technology, Pasadena CA; Case Western Reserve University, Cleveland OH; City College of New York, New York NY; Catholic University of America, Washington DC; Colorado State University, Fort Collins CO; Davidson College, Davidson, NC; Drexel University, Philadelphia PA; Eastern College, St. David's PA; Emory, Atlanta GA; George Mason University, Fairfax VA; George Washington University, Washington DC; Georgetown University, Washington DC; Georgia Institute of Technology, Atlanta GA; Gettysburg College, Gettysburg PA; Goucher College, Towson MD; Hood College, Frederick, MD; Howard University, Washington DC; Johns Hopkins University, Baltimore MD; La Salle University, Philadelphia PA; Lebanon Valley College, Annville PA; Lincoln University, Lincoln PA; Loyola College, Baltimore MD; Marquette, Milwaukee WI; Michigan State University, East Lansing MI; Muhlenberg College, Allentown PA; North Carolina State University, Raleigh, NC; Northwestern University, Evanston IL; Ohio State University, Columbus OH; Ohio University, Athens, OH; Penn State University, College Station PA; Princeton University, Princeton NJ; Rensselaer Polytechnic Institute, Troy, NY; Rice University, Houston TX; Rochester University, Rochester NY; Roger Williams University, Bristol RI; Rutgers University, Passaic NJ; Rutgers University, Newark NJ; St. Michael's College, Burlington, VT; SUNY-Binghamton, Binghamton NY; SUNY-Buffalo, Buffalo NY; Temple University, Philadelphia PA; Towson University, Towson MD; Tulane University, New Orleans LA; University of Alabama, Birmingham AL; University of California, Berkeley CA; University of California, Irvine CA; University of California, Los Angeles CA; University of California, San Diego CA; University of California, Santa Barbara CA; University of Chicago, Chicago IL; University of Delaware, Newark DE; University of Florida, Gainesville FL; University of Maryland, College Park MD; University of Maryland at Baltimore County, Catonsville, MD; University of Maryland at Baltimore, Baltimore MD; University of Miami, Miami FL; University of Minnesota, Minneapolis, MN; University of New Hampshire, Durham, NH; University of North Carolina, Chapel Hill NC; University of Pennsylvania, Philadelphia PA; University of Pittsburgh, Pittsburgh, PA; University of Richmond, Richmond VA; University of Texas at Houston, Houston TX; University of Utah, Salt Lake City UT; University of Washington, Seattle WA; University of Wisconsin, Madison WI; University of Wyoming, Laramie WY; Vanderbilt University, Nashville, TN; Virginia Tech, Blacksburg VA; Virginia Wesleyan College, Norfolk VA; Washington University, St. Louis MO; Wayne State University, Detroit MI; Washington College, Chestertown MD; West Virginia University, Morgantown WV; and William Paterson University, Wayne NJ.

**International Universities and Colleges** (15 Total): Catholic University of Chile, Temuco Chile; Imperial University, London England; Lund University, Lund Sweden; Nanyang Technological University, Singapore; Pontifical Catholic University of Chile, Santiago Chile; Stockholm University, Stockholm Sweden; KTH Royal Institute of Technology, Stockholm Sweden; Ciudad Universitaria, Buenos Aires Argentina; Unidad Mérida, Mérida, Yucatán, México; Universidad De Santiago De Chile, Santiago Chile; University of Calgary, Alberta Canada; University of Ferrara, Ferrara Italy; University of Strasbourg, Strasbourg, France; and Uppsala University, Uppsala, Sweden.

**Invited Presentations at Professional Meetings (2009→present):**

Hybrid Organic Photovoltaics (HOPV14), Lausanne Switzerland (May 12, 2014)

*The Roles of Iodide Ions in Dye Sensitized Solar Cells*

“Molecular Inorganic Chemistry at the Frontiers of Energy Research” 247<sup>th</sup> National ACS Meeting, Dallas TX (March 16, 2014)  
*Photoinduced electron transfer at TiO<sub>2</sub> interfaces sensitized to visible light with triarylamine-appended bis(tridentate) cycloruthenated complexes*

“Photovoltaics, Solar Energy Materials & Technologies” XXII International Materials Research, Cancun Mexico (August 11, 2013)

*New Donor-Acceptor Compounds for Dye Sensitized Solar Cells.*

“Solar Solutions to Energy and Environmental Problems” Telluride Workshop, Telluride CO (August 7, 2013)

*Mechanisms of Sensitization and Regeneration in Dye Sensitized Solar Cells.*

“Photochemistry” Gordon Research Conference, Stone Hill MA (July 16, 2013)

*Solar Photochemistry with Charge Transfer Excited States*

“Organic and hybrid interfaces in excitonic solar cells: from fundamental science to applications” European Materials Research Society, Strausburg France (May 28, 2013)

*Substitution of O with S Heteroatoms in Organic Dyes at TiO<sub>2</sub> Interfaces*

30<sup>th</sup> Eastern Regional Photosynthesis, Woods Hole MA (April 12, 2013)

*Electron Transfer at Sensitized TiO<sub>2</sub> Interfaces : Surface Electric Fields and Mechanisms for I-I Bond Formation*

“Electron Donor-Acceptor Interactions” Gordon Research Conference, Newport RI (August 8, 2012)

*Making chemical bonds with light for solar energy conversion and storage.*

19<sup>th</sup> International Conference on Photochemical Conversion and Storage of Solar Energy (IPS-19), Pasadena, CA (July 31, 2012)

*Efficient Sensitization of TiO<sub>2</sub> with Co(I) Coordination Compounds*

2<sup>nd</sup> International Workshop: Natural and Artificial Photosynthesis, Bioenergetics and Sustainability, Nanyang Technical University Singapore (June 12, 2012)

*Surface Electric Fields and Mechanisms of I-I Bond Formation*

Canadian Chemistry Conference and Exhibition, Calgary CA (May 28, 2012)

*Regeneration Mechanisms at Sensitized TiO<sub>2</sub> Interfaces*

“Photons-to-Fuel...” 243<sup>rd</sup> National A.C.S. Meeting, San Diego CA (March 26, 2012)

*Non-Nernstian Two-Electron Transfer Photocatalysis at Metalloporphyrin-TiO<sub>2</sub> Interfaces*

SANS Workshop, Les Disablerets, Switzerland (March 14, 2012)

*Excitonic Solar Cells*

24<sup>th</sup> Austin Symposium on Molecular Structure and Dynamics at Dallas, Dallas TX (March 6, 2012)

*Dynamics of Molecules at Semiconductor Interfaces for Energy Conversion*

Workshop on Emerging Materials for Thin Film Solar Cells, Santa Barbara, CA (August 11, 2011)

*Dye sensitized solar cells*

VIII International Krutyn Summer School, Krutyn Poland (June 14-20, 2011)

*1. Metal-to-ligand Charge Transfer Excited States; and 2. Optimization of Energy Conversion Efficiencies*

21<sup>st</sup> Inter-American Photochemical Society Conference, Mendoza Argentina (May 22, 2011)

*Chemical Bond Formation with Light*

Saudi International Electronics, Communications and Photonics Conference, Riyadh Saudi Arabia (April 24, 2011)

*Electron Transfer Dynamics in Efficient Solar Cells*

**Invited Presentations at Professional Meetings (2009→) (Con't):**

AAAS National Meeting, Washington DC (February 19, 2011)  
*Making Chemical Bonds with Visible Light*

UK Semiconductor Photocatalysis Meeting, London England (January 7, 2011)  
*Multi-Electron Transfer Catalysis at Molecular-TiO<sub>2</sub> Interfaces*

“Light Driven Generation of Hydrogen ...” International Chemical Congress of Pacific Basin Societies (December 16, 2010)  
*Photo-initiated formation of chemical bonds in fluid solution and at semiconductor interfaces*

“Molecular Photonics” International Chemical Congress of Pacific Basin Societies (December 17, 2010)  
*Stark effects at sensitized TiO<sub>2</sub> molecular photonic materials*

45<sup>th</sup> Midwest Regional ACS Meeting (October 28, 2010)  
*Photo-Induced Iodide Redox Chemistry in Fluid Solution and at TiO<sub>2</sub> Interfaces*

7<sup>th</sup> Workshop in Computational Chemistry and Molecular Spectroscopy, Punta deTralca Chile (October 20, 2010)  
*Electron Transfer from Molecular Excited States and Semiconductor Nanoparticles*

“Inorganic-Organic Solar Cells” 240<sup>th</sup> National A.C.S. Meeting, Boston, MA (August 24, 2010)  
*Electric Field Effects in Dye Sensitized Solar Cells*

“Molecular Systems for Efficient Solar ...” 240<sup>th</sup> National A.C.S. Meeting, Boston, MA (August 23, 2010)  
*Visible Light into Chemical Bonds: Dynamics and yields of I-I bond formation in fluid solution and at sensitized interfaces*

SPIE, San Diego CA (August 3, 2010)  
*Two sequential photo-reductions ... for multi-electron transfer chemistry*

Solar Photochemistry and Materials for Energy and Environment, Pohang University, Korea (July 31, 2010)  
*Photodriven Multi-Electron Transfer Reactions at Molecular Semiconductor Interfaces*

18<sup>th</sup> International Conference on Photochemical Conversion and Storage of Solar Energy, Seoul Korea (July 25, 2010)  
*Photo-sensitized Formation of I-I Bonds in Fluid Solution and at TiO<sub>2</sub> Interfaces*

The 5<sup>th</sup> Advanced Photovoltaics Center Seminar, National Institute for Materials Science, Tsukuba Japan (July 13, 2010)  
*Redox Mediators for Dye Sensitized Solar Cells*

NIMS 2010 Conference; Challenges of Nanomaterials Science, Tsukuba Japan (July 13, 2010)  
*Visible Light Generation of Chemical Bonds in Fluid Solution and at Sensitized TiO<sub>2</sub> Interfaces*

National Science Foundation Inorganic Chemistry Workshop, Santa Fe, NM (May 18, 2010)  
*Chemical Bond Formation with Visible Light in Fluid Solution and at TiO<sub>2</sub> Interfaces*

Third International Conference on Semiconductor Photochemistry, Glasgow, Scotland (April 3, 2010)  
*Photosensitized Formation of I-I Bonds in Fluid Solution and at TiO<sub>2</sub> Interfaces*

Solar Fuels and Energy Storage: The Unmet Needs, SERC Chapel Hill, NC (January 14, 2010)  
*Photodriven Chemical Bond Formation in Fluid Solution and at Semiconductor Interfaces*

“Photons-to-Fuel...” 238<sup>th</sup> National A.C.S. Meeting, Washington DC (August 16, 2009)  
*Photosensitized I-I Bond Formation in Fluid Solution and at Semiconductor Interfaces*

International Workshop on Materials and Devices for Solar Energy Conversion, Wichita, KS (May 23, 2009)  
*Photoinduced Interfacial Charge Transfer in Efficient Molecular Solar Cells*

**Invited Presentations at Professional Meetings (2009→) (Con't):**

“Capturing and Storing Solar Energy-...” 237<sup>th</sup> National A.C.S. Meeting, Salt Lake City, UT (March 22-26, 2009)  
*Sensitized Iodide Redox Chemistry*

2009 F.A. Cotton Award Symposium 237<sup>th</sup> National A.C.S. Meeting, Salt Lake City, UT (March 22-26, 2009)  
*Small Molecule Activation with Light and Karlin Compounds*

Inter-American Photochemical Society Annual Meeting, St. Pete's Beach, FL (January 2-6, 2009)  
*Photochemical Approaches to Solar Energy Conversion*

## **Publications:**

### **Journal Publications:**

- 1) **Evidence For Adduct Information at the Semiconductor-Gas Interface. Photoluminescent Properties of Cadmium Selenide in the Presence of Amines.** Meyer, G.J.; Lisensky, G.C.; Ellis, A.B. *J. Amer. Chem. Soc.* **1988**, *110*, 4914.
- 2) **A Selective Detector for Gas Chromatography Based on Adduct-Modulated Semiconductor Photoluminescence.** Lisensky, G.C.; Meyer, G.J.; Ellis, A.B. *Anal. Chem.* **1988**, *60*, 2531.
- 3) **Dioxygen-Copper Reactivity. Models for Hemocyanin: Reversible O<sub>2</sub> and CO Binding to Structurally Characterized Dicopper(I) Complexes Containing Hydrocarbon-Linked Bis[2-(2-pyridyl)ethyl]amine Units.** Karlin, K.D.; Haka, M.S.; Cruse, R.W.; Meyer, G.J.; Farooq, A.; Gultneh, Y.; Hayes, J.C.; Zubietta, J. *J. Amer. Chem. Soc.* **1988**, *110*, 1196.
- 4) **Semiconductor-Olefin Adducts. Photoluminescent Properties of Cadmium Sulfide and Cadmium Selenide in the Presence of Butenes.** Meyer, G.J.; Leung, L.K.; Yu, J.C.; Lisensky, G.C.; Ellis, A.B. *J. Amer. Chem. Soc.* **1989**, *111*, 5146.
- 5) **Time-Resolved Luminescence of Electron-Hole Pairs in Cd(S,Se) Graded Semiconductors.** Hane, J.K.; Prisant, M.G.; Harris, C.B.; Meyer, G.J.; Leung, L.K.; Ellis, A.B. *J. Phys. Chem.* **1989**, *93*, 7975.
- 6) **Modulation of the Time-Resolved Photoluminescence of Cadmium Selenide by Adduct Formation with Gaseous Amines.** Leung, L.K.; Meyer, G.J.; Lisensky, G.C.; Ellis, A.B. *J. Phys. Chem.* **1990**, *94*, 1214.
- 7) **Synthesis of Redox Derivatives of Lysine and Related Peptides Containing Phenothiazine or Tris(2,2'-bipyridine)ruthenium(II).** Peek, B.M.; Ross, G.T.; Edwards, S.W.; Meyer, G.J.; Meyer, T.J.; Erickson, B.W. *Int. J. Peptide Protein Res.* **1991**, *38*, 114.
- 8) **Photoelectrochemical Solar Energy Conversion at Nanostructured Materials.** Meyer, G.J.; Searson, P.C. *Interface* **1993**, *2*, 23-27.
- 9) **Molecular Level Photovoltaics: The Electro-Optical Properties of Metal Cyanide Complexes Anchored to Titanium Dioxide.** Heimer, T.A.; Bignozzi, C.A.; Meyer, G.J. *J. Phys. Chem.* **1993**, *97*, 11987-11994.
- 10) **Molecular Level Electron Transfer and Excited State Assemblies on the Surfaces of Metal Oxides and Glass.** Meyer, T. J.; Meyer, G.J.; Pfenning, B.; Schoonover, J. R.; Timpson, C.; Wall, J.F.; Kobusch, C.; Chen, X.; Peek, B.M.; Wall, C.G.; Ou, W.; Erickson, B. W.; Bignozzi, C.A. *Inorg. Chem.* **1994**, *33*, 3952-3963.
- 11) **Photophysical Properties of Ruthenium Polypyridyl Photonic SiO<sub>2</sub> Gels.** Castellano, F.N.; Heimer, T.A.; Thandasetti, M.; Meyer, G.J. *Chem. Mater.* **1994**, *6*, 1041-1048.
- 12) **Spectroscopic and Excited State Properties of Titanium Dioxide Gels.** Castellano, F.N.; Stipkala, J.M.; Friedman, L.A.; Meyer, G.J. *Chem. Mater.* **1994**, *6*, 2123-2129.
- 13) **Enhanced Spectral Sensitivity from Ru(II) Polypyridyl Photovoltaic Devices.** Argazzi, R.; Bignozzi, C.A.; Heimer, T.A.; Castellano, F.N.; Meyer, G.J. *Inorg. Chem.* **1994**, *33*, 5741-5749.
- 14) **Photodriven Energy Transfer from Cuprous Phenanthroline Derivatives.** Castellano, F.N.; Ruthkosky, M.; Meyer, G.J. *Inorg. Chem.* **1995**, *34*, 3-4.
- 15) **Dynamic Quenching of Porous Silicon Photoluminescence by Anthracene and 10-Methylphenothiazine.** Ko, M.C.; Meyer, G.J. *Chem Mater.* **1995**, *7*, 12-14.

- 16) **Optical and Electrical Properties of Nanostructured Titanium Dioxide Films.** Cao, F.; Oskam, G.; Searson, P.C.; Stipkala, J.; Farzhad, F.; Heimer, T.A.; Meyer, G.J. *J. Phys. Chem.* **1995**, *99*, 11974-11980.
- 17) **DNA Dynamics Observed with Long Lifetime Metal-Ligand Complexes.** Lakowicz, J.R.; Malak, H.; Gryczynski, I.; Castellano, F.N.; Meyer, G.J. *Biospectroscopy* **1995**, *1*, 163-168.
- 18) **Dynamic Electron Transfer in SiO<sub>2</sub> Aqua- and Alco- Gels.** Castellano, F.N.; Meyer, G.J. *J. Phys. Chem.* **1995**, *99*, 14742-14748.
- 19) **Photosensitization of Wide Bandgap Semiconductors with Antennae Molecules.** Bignozzi, C.A.; Argazzi, R.; Schoonover, J.R.; Meyer, G.J.; Scandola, F. *Sol. Energy Mater. Sol. Cells* **1995**, *38*, 187-198.
- 20) **Long-Lived Photo-Induced Charge Separation Across Nanostructured TiO<sub>2</sub> Interfaces.** Argazzi, R.; Bignozzi, C.A.; Heimer, T.A.; Castellano, F.N.; Meyer, G.J. *J. Am. Chem. Soc.* **1995**, *117*, 11815-11816.
- 21) **An Acetylacetonate Based Semiconductor-Sensitizer Linkage.** Heimer, T.A.; D'Arcangelis, S.T.; Farzad, F.; Stipkala, J.M.; Meyer, G.J. *Inorg. Chem.* **1996**, *35*, 5319-5324.
- 22) **Luminescence of Charge Transfer Sensitizers Anchored to Metal Oxide Nanoparticles.** Heimer, T.A.; Meyer, G.J. *J. Lumin.* **1996**, *70*, 468-478.
- 23) **Dynamic Quenching of Porous Silicon Excited States.** Ko, M.C.; Meyer, G.J. *Chem. Mater.* **1996**, *8*, 2686-2692.
- 24) **Electron Transport Properties in Porous Nanocrystalline TiO<sub>2</sub> Photoelectrochemical Cells.** Cao, F.; Oskam, G.; Searson, P.C.; Meyer, G.J. *J. Phys. Chem.* **1996**, *100*, 17021-17027.
- 25) **Photodriven Electron and Energy Transfer from Copper Phenanthroline Excited States.** Ruthkosky, M.; Castellano, F.N.; Meyer, G.J. *Inorg. Chem.* **1996**, *35*, 6406-6412.
- 26) **Light Induced Processes in Molecular Gel Materials.** Castellano, F.N.; Meyer, G.J. *Prog. Inorg. Chem.* **1997**, *44*, 167-209.
- 27) **Remote Electron Injection from Supramolecular Sensitizers.** Argazzi, R.; Bignozzi, C.A.; Heimer, T.A.; Meyer, G.J. *Inorg. Chem.* **1997**, *36*, 2-3.
- 28) **Light Induced Charge Separation Across Ru(II) Modified Nanocrystalline TiO<sub>2</sub> Interfaces with Phenothiazine Donors.** Argazzi, R.; Bignozzi, C.A.; Heimer, T.A.; Castellano, F.N.; Meyer, G.J. *J. Phys. Chem. B* **1997**, *101*, 2591-2597.
- 29) **Efficient Light-to-Electrical Energy Conversion: Nanocrystalline TiO<sub>2</sub> Films Modified with Inorganic Sensitizers.** Meyer, G.J. *J. Chem. Ed.* **1997**, *74*, 652-656.
- 30) **Long-Lifetime Metal Ligand Complexes as Luminescent Probes for DNA.** Malak, H.; Gryczynski, I.; Lakowicz, J.R.; Castellano, F.N.; Meyer, G.J. *J. Fluorescence* **1997**, *7*, 107-112.
- 31) **Long-Lived Charge Separated States Following Light Excitation of Cu(I) Donor-Acceptor Compounds.** Ruthkosky, M.; Kelly, C.A.; Castellano, F.N.; Meyer, G.J. *J. Amer. Chem. Soc.* **1997**, *119*, 12004-12005.
- 32) **Light Induced Charge Separation at Sensitized Sol-Gel Processed Semiconductors.** Stipkala, J.M.; Heimer, T.A.; Livi, K.J.T.; Meyer, G.J. *Chem. Mater.* **1997**, *9*, 2341-2353.
- 33) **The Limiting Role of Iodide Oxidation in Titanium Dioxide Photoelectrochemical Cells Sensitized with cis-Os(LL)<sub>2</sub>(CN)<sub>2</sub>.** Argazzi, R.; Bignozzi, C.A.; Heimer, T.A.; Hasselmann, G.M.; Meyer, G.J. *J. Phys. Chem B* **1998**, *102*, 7577-7581.
- 34) **Long-lifetime Ru(II) Complexes for the Measurement of High Molecular Weight Protein Hydrodynamics.** Szmackinski, H.; Castellano, F.N.; Terpetsching, E.; Dattelbaum, J.D.; Lakowicz, J.R.; Meyer, G.J. *Biochim. Biophys. Acta* **1998**, *1383*, 151-159.

- 35) **Electron and Energy Transfer from Cu(I) MLCT Excited States.** Ruthkosky, M.; Castellano, F.N.; Kelly, C.A.; Meyer, G.J. *Coord. Chem. Rev.* **1998**, *171*, 309-322.
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