

IAPS NEWSLETTER
2007



2007

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October 2007

Dear Colleagues,

I take this opportunity to update you on the recent activities of the society. The preparations for the 18th I-APS Winter Conference (http://www.i-aps.org/18th_wintconf/mainpage.htm) are well underway. The conference will be held in Florida but it is moving from Clearwater to the Sirata Beach Resort and Conference Center in St. Petersburg. Linda Peteanu and John Toscano have put together a great program and I hope to see many of you in January.

At the conference the society will honor the winners of I-APS awards for 2007 and 2008. We will have the opportunity to hear about their exciting research endeavors. The I-APS winner for 2007 is Joseph T. Hupp from Northwestern University and the 2007 I-APS Young Investigator Award is Torsten Fiebig at Boston College. Peter C. Ford from UC, Santa Barbara won the 2008 I-APS award, while Elizabeth J. Harbron from The College of William and Mary is the 2008 I-APS Young Investigator award winner. I am also pleased to announce that Doug Neckers (Bowling Green State University) and Jack Saltiel (Florida State University) were selected as the new fellows of the Society. I would like to congratulate all the award winners and fellows. Their accomplishments are a testament to the vitality and dynamism of the society.

The election of the new officers of the society is currently underway. I would like to thank Tito Scaiano, Jack Saltiel and Devens Gust for accepting to serve on the I-APS nominating committee. Consider participating in the election process. The committee will accept suggestions from the membership for nominations through November 15th, or you can make direct nominations as outlined in the society's constitution and bylaws.

During the last year I have worked with lawyers and accountants to clarify the Society's status and its reporting and tax responsibilities. This was a non-glamorous, but necessary, task due to stricter rules for non-profit organizations, such as I-APS.

Finally, one of the discussion topics at the executive meeting during the Photochemistry Gordon Conference last July was on mechanisms to increase the number and the involvement of members in the society. I would like to hear any suggestions you may have to increase the relevance of I-APS to you as a member.

Best regards,

C. Bohne

Letter from the Newsletter Editor

Dear Colleagues,

My special thanks to those who made contributions to this newsletter: Otto P. Strausz for his retrospective of the first years of I-APS, Silvia Braslavsky for the description of Glossary of Terms used in Photochemistry, Fred Lewis for his insights on the career of the 2006 I-APS Award winner Joseph Hupp, Diego Armesto, David Crumrine and Richard Johnson for photographs from Special Symposium "60 Years of Physical Organic Chemistry" honoring Howard Zimmerman and Lei Zhu for the report on the 2007 GRC conference.

Please continue to provide me with important news that you would like to share with other Society members. In particular, I am always looking for volunteers to cover recent events related to all aspects of "photosciences" such as photochemistry, photophysics and photobiology.

Finally, I join in congratulating the I-APS Award winners (and, in particular, my FSU colleague Jack Saltiel) and hope to see many of you at the upcoming Winter I-APS conference.

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2007 Awards

I-APS



The 2007 I-APS Award in Photo- chemistry

was awarded to Professor
Joseph T. Hupp.

Joseph T. Hupp
received his B. S.

Degree in Chemistry at Houghton College in 1979 and earned his Ph.D. in Chemistry from Michigan State University in 1983 with M. J. Weaver. After doing postdoctoral studies in 1984-1986 at the University of North Carolina with T. J. Meyer, he started his independent career at Northwestern University in 1986 and is now Morrison Professor of Chemistry. Hupp is the coauthor of more than 230 papers and has received numerous awards and honors which include the David C. Grahame Award and Carl Wagner Memorial Award from the Electrochemical Society, the National Fresenius Award of Phi Lambda Upsilon, Henry and Camille Dreyfus Teacher-Scholar Award, Sloan Fellowship, and NSF Presidential Young Investigator Award.

In his nomination letter, Fred Lewis mentions that Hupp was both “remarkably prolific ... and remarkably broad in his interests” and that he has solved a number of difficult and important problems in very creative ways. A brief list of his research accomplishments summarized by Lewis includes:

- “The experimental application of time-dependent scattering methods to charge-transfer problems. These experiments provide complete, quantitative, mode-by-mode descriptions of vibrational barriers to charge transfer, i.e. complete experimental descriptions of the

Franck-Condon part of the charge-transfer problem.

- Studies aimed at providing direct measures of charge transfer distances, in which he showed that these almost always differ from geometric donor/acceptor separation distances – an important result because of its more general implications for electronic coupling and solvent reorganization in real systems. He also showed how Stark effect spectroscopy and transient photoconductivity findings could be combined to give unique directional charge redistribution information.
- In collaboration with Paul Barbara he reported one of the first real-time observations of vibrational coherence in an electron transfer reaction. In collaboration with his colleague Ken Spears he showed that Duschinsky behavior (mode mixing) could exert enormous rate effects upon certain classes of charge transfer reactions. And on his own he showed that difficult questions concerning light-induced charge redistribution could be resolved using hyper-Rayleigh scattering.”

Lewis also mentions that “Joe has accomplished beautiful mechanistic work, especially on dye-sensitized solar cells. For example, by directly measuring tiny mass changes in operating photoelectrodes he showed that interfacial electron transfer – the key reaction in these kinds of cells – can be strongly coupled to interfacial proton or alkali metal ion transfer. Joe and his students were also the first to observe Marcus inverted behavior at interfaces, an intriguing fundamental finding but also one that is important for understanding the origin of the high efficiencies of these devices. Most recently he’s turned his attention to the important unsolved problem of fast, directional, long-range charge transport and separation. Here he has

shown, via direct experimental measurements, that transport can be greatly accelerated by manipulating photoelectrode architecture (thousand-fold increases in transport-rate:recombination-rate ratios).”

Lewis also mentions the considerable service that Hupp rendered to the field of photochemistry, noting that “among other things, he served as an external reviewer for multiple photochemistry-centered programs at national laboratories, a panelist for numerous DOE and NSF workshops and programs, and an organizer of several scientific meetings/symposia, including the 2000 I-APS meeting. Currently he is an Associate Editor of the *Journal of the American Chemical Society* and Chair of the Department of Chemistry at Northwestern. He has trained and placed 40 Ph.D.s and an equal number of postdocs, several of whom are now mentoring undergraduate, graduate, and postdoctoral students.”

2007 I-APS Young Investigator



Award winner
Torsten Fiebig
received his B.S. (1993), M.Sc. (1994) and his Ph.D. degrees (1996, “Summa cum laude”) at Max-Planck-

Institute for Biophysical Chemistry / University of Göttingen under the supervision of Professor Jürgen Troe where he performed “Experimental and Theoretical Studies on Electron Transfer in Covalently Linked”. After a postdoctoral stint with Prof. Ahmed H. Zewail at California Institute of Technology (1997-2000), he headed an independent research group (non-tenure-track Assistant Professorship) supported by the German National Science Foundation (DFG) at

Technical University of Munich in 2000 – 2004 where he also received Habilitation in Physical Chemistry. From 2003, he took a position as Assistant Professor in Boston College where his research focused on ultrafast processes in natural and artificial chromophore systems and development of new experimental methodologies for studying real-time structural changes in complex molecular systems.

The Fiebig research group is interested in a fundamental understanding of molecular interactions and ultrafast processes (e.g. energy, electron and proton transfer) in complex molecular architectures. Our primary focus is to develop and apply new spectroscopic methodologies for probing real-time structural changes in biological systems. The underlying goal is to understand *molecular function* by probing *structure* and *dynamics* simultaneously. Currently, the Fiebig group investigates the interaction of UV-radiation with DNA on the ultrafast time scale addressing the question of how electronic excess energy delocalizes and dissipates in π -stacked nucleic acids.

FRESH OFF THE PRESS!

The winners of the 2008 Awards are:

I-APS award: Peter C. Ford, University of California Santa Barbara

I-APS Young Investigator Award: Elizabeth J. Harbron, The College of William and Mary

I-APS Fellow: Douglas C. Neckers, Bowling Green State University

I-APS Fellow: Jack Saltiel, Florida State University.

Biosketches and information about the 2008 Winners will be published in the next I-APS Newsletter.

First Years of I-APS

Otto P. Strausz

Thirty years, rich in exciting history, seem so long and yet so close. Mental images of travels and memories of things long past are often hazy and out of focus. And so are my recollections of the days antecedent to the birth of the I-APS. The place of birth was Edmonton and the date, August 11 or 12, 1975, within the venue of the VIII International Conference on Photochemistry August 7–13, 1975. Here, the proposal to consider whether or not the need and time had arisen for the formation of a photochemical society for America was presented to an *ad hoc* committee selected from the contemporary luminaries of American photochemists attending the conference

After considerable constructive discussions it was unanimously decided that yes, this is the time, the place, and the opportunity to establish a photochemistry society for America and I was given the authority to proceed with the realization of the idea, along with enthusiastic offers of personal help from most of the participants. And so it happened! The membership list of this *ad hoc* committee—according to written records—is given in Table 1.

Table 1. *Ad hoc* Founding Committee. August 11 or 12, 1975, Edmonton

President:	Otto Strausz	University of Alberta
Vice-President:	George Hammond	UC Santa Cruz
Secretary:	Paul de Mayo	University of Western Ontario
Treasurer:	Jack Williams	Eastman Kodak Co.
Members:	Arthur Adamson	University of Southern California
	Jack Calvert	Ohio State University
	Orville Chapman	University of California, Los Angeles
	Leonard Grossweiner	Illinois Institute of Technology
	Jim McNesby	University of Maryland
	Jim Pitts	University of California, Riverside

As I mentioned above, my memory of those days is somewhat obscured and to my regret—as it often happens to witnesses of history, not thinking that one distant day “those days” might become history—it did not occur to me to keep a written report for posterity. Perhaps some of the participants whose memory of “those days” is more vivid can correct or supplement my presentation of “those days” here.

In my post mortem analyses, trying to find some excuse for not having kept proper records of history, I have argued with myself that those were exceptionally busy days for me, especially the year immediately preceding the conference.

As it is now universally recognized, Alberta, of which Edmonton is the capital, has the good fortune to possess the largest known accumulation of petroleum in the world in the form of tar sands, that is, sand-embedded extremely heavy oils. I, along with my erstwhile mentor, university superior and dear personal friend, the late Harry E. Gunning, were intrigued that so little was known about the origin, history and chemistry of this gigantic geological wonder and decided to do something about it. That is how I got involved in tar sand chemistry (a historical record of ancient photochemistry) and little did I suspect in 1974 that this was the first step on the road that ultimately led to my disengagement from my beloved photochemistry. At this point fate intervened when Harry became President of the University of Alberta, which meant that significantly more than my anticipated share of developing a

research program, setting up laboratories, hiring staff, writing proposals, etc. on tar sand chemistry, along with running the photochemistry program and organizing the upcoming conference, fell onto my shoulders.

In the early 1970s I often mused over the lack of any central organization in the field of photochemistry in America, especially in light of the highly successful operation and high visibility of the European Photochemistry Association. As I began work on the organization of the VIII International Conference on Photochemistry I became increasingly more aware that we were missing something fundamentally important, some mechanism channeling the ever-proliferating branches of photochemistry and closely related branches of physical and biological sciences into a coherent organizational framework. The self-evident solution was a society or association for American photochemistry. And so that was the beginning of the beginning.

After receiving authorization from the founding committee, the details of how to create a professional society had to be thought over and worked out. These included questions like the definition of aims, geographical encompassment, name, organizational structure, logo and seal design, incorporation as a tax-exempt professional organization (in Canada and U.S.), *etc.*

I obtained highly valuable and enthusiastic help from Dr. Colin James (presently Associate Vice-President, Academic, Thompson Rivers University, Kamloops, British Columbia), Drs. Elizabeth Lown and Imre Safarik who were all research associates in my group at that time at the University of Alberta. Colin was particularly inspired and dedicated, and remained active in the Society's affairs throughout my term until the summer of 1980 as a Special Secretary. He offered to prepare an International Directory of Photochemists in which project his wife Kate, who was also helping out at that time in my group as a secretary, lent him a helpful hand. The offer was of course accepted and the first issue of the directory came out in 1977, listing 400 I-APS members. The second issue appeared in 1978 along with a Directory of Photochemistry Laboratories in North, Central and South America and the fourth in November, 1979—all by the James team. Meanwhile, Imre Safarik took exemplary care of the financial matters as the first acting Treasurer of the Society. This position was later taken over by Rafik Loutfy of Xerox Research, Mississauga, Ontario.

One of the first and most important items of business was the drafting of a constitution and bylaws. These were needed for the incorporation to gain legal status for the society. After considerable contemplation it was decided that the organization should be a society rather than an association embracing North, Central and South America with the name Inter-American Photochemical Society, I-APS. A constitution and bylaws were drafted and the Society was first incorporated on June 14, 1976 in Canada by Otto P. Strausz, Elizabeth M. Lown and Frank C. James and, I believe in 1979 or 1980, by Jack Williams in the U.S. The delay in the U.S. incorporation was due to a general confusion in the IRS relating to the tax-exempt status of professional societies. The constitution and bylaws were later published in a separate pamphlet.

The first newsletter edited by Colin James appeared on February 14, 1977 and the first general meeting was held in Chicago during the Fall Annual Meeting of the American Chemical Society within the venue of the I-APS Photochemistry Symposium sponsored by the Physical and Organic Divisions of the ACS on August 31, 1977. Here, the first financial statement audited by Bill Jones, Dalhousie University, Nova Scotia, and Samir Farid, Eastman Kodak Co., Rochester, was made public. Subsequent financial statements were audited by Norman Basco, University of British Columbia, and Ron Steer, University of Saskatchewan. Next, the first election for the Executive Committee was organized and held on April 15, 1978. Here, six members of the Executive were elected and the new Executive, with four additional coopted members, took office July 1, 1978. The composition of this first partially-elected Executive is given in Table 2.

Table 2. First partially elected Executive Committee
(elected April 15, 1978; taking office July 1, 1978)

President:	Otto Strausz*	University of Alberta
Vice-President:	Sherry Rowland**	University of California, Irvine
Treasurer:	Jack Williams*	Eastman Kodak Co.
Members:	Harold Hart*	Michigan State University
	Marilyn Jacox	National Bureau of Standards
	Josef Michl*	University of Utah
	Pill-Soon Song	Texas Technical University
	William Ware*	University of Western Ontario
	Jeffrey Zink	University of California, Los Angeles
	Eduardo Lissi	Univ. Technica del Estado, Santiago
Special Secretary:	Colin James	University of Alberta

*elected members; **the first elected Vice-President, Sherry Rowland, unfortunately had to resign because of personal reasons and was replaced by Harold Hart. The first fully elected Executive took office July 1, 1979, Table 3, and my replacement as

Table 3. First elected Executive committee
Elected April 15, 1979. Taking office July 1, 1979

President:	Otto Strausz	University of Alberta
Vice-President:	Harold Hart	Michigan State University
Treasurer:	Jack Williams	Eastman Kodak Co.
Members:	Jack Calvert	Ohio State University
	Angelo Lamola	Bell Laboratories, Murray Hill
	Josef Michl	University of Utah
	William Ware	University of Western Ontario
	Mark Wrighton	MIT, Cambridge
	Richard Zare	Stanford University
Special Secretary:	Colin James	University of Alberta

President took place in the April 15, 1980 election, resulting in the composition of the Executive Committee given in Table 4. Here, the newly-elected President, Jack Calvert, again resigned for personal reasons and was replaced by Don Arnold, the newly-elected Vice-President.

Table 4. Elected Executive committee
Elected April 15, 1980. Taking office July 1, 1980

President:	Jack Calvert	Ohio State University
Vice-President:	Don Arnold	Dalhousie University
Members:	Ed Chandross	Bell Laboratories, Murray Hill
	Jim Bolton	University of Western Ontario
	Geraldine Kenney-Wallace	University of Toronto
	Ed Lee	University of California, Irvine
	Nick Turro	Columbia University
	Mark Wrighton	MIT, Cambridge
	Richard Zare	Stanford University
	Howard Zimmerman	University of Wisconsin

Back in 1976 a logo and seal were designed which is the familiar one in use today, featuring a contour map of the Western Hemisphere—North, Central and South America—the geographical area represented by the Society, with a large, heavy hu in the center and the whole drawing positioned in a circle with inscription above and below, INTER-AMERICAN and PHOTOCHEMICAL SOCIETY, respectively.

During my stewardship of the I-APS many issues, in addition to the ones discussed above, arose, some of which have been solved and others left to the next generation of leaders to resolve.

To the former category belongs the establishment of an annual series of I-APS meetings co-sponsoring photochemistry symposia such as, *e.g.* within the 4th ACS Rocky Mountain regional Meeting organized by Stanley Cristol and Ted Koch, Boulder, CO June 6–8, 1978; 176th ACS National Meeting, arranged by Peter Rentzepis, Miami Beach, September 10–15, 1978; workshop on Chemically Induced Dynamic Polarization, organized by Jeff Wan, Kingston, Ontario, June 7–10, 1978; Photochemistry as a Route to Chemistry, Chemical Societies of Japan and America, Honolulu, April 1–6, 1979, arranged by Howard Zimmerman; Laser Symposium arranged by Geraldine Kenney-Wallace, 62nd Annual Conference of the Chemical Institute of Canada, Vancouver, June 3–6, 1979, and others.

The Newsletter continued to be the main medium of communication between the Executive and membership of the Society and Colin James' excellent work as Editor was continued by Tom Bell of Simon Fraser University as of late 1979.

Contacts were made with the European Photochemistry Association, Japanese Photochemistry Association and IUPAC Conferences on Photochemistry through discussions with the contemporary Presidents of these organizations, Jacques Jousot-Dubien, Ikuzo Tanaka and T. Murai, and Kurt Schaffner, in order to foster cooperation among these fraternal organizations.

A number of divisions were set up; among them, the Organic Division under the chairmanship of Bill Dauben, Howard Zimmerman, the late Gary Griffin and Harry Morrison, the Physical Division with Peter Rentzepis, the Solar Energy Division with John Connolly and Norman Lichtin, and the Industrial Division with R. Srinivasan and Samir Farid as chairmen. A Distinguished Member category was created with an initial slate:

F.E. Blacet, M. Calvin, G. Herzberg, R. Livingston, R.S. Mulliken and W.A. Noyes, Jr.

The question of the sponsorship of a photochemistry journal under the joint sponsorship of the three regional societies, I-APS, EPA and JPA, was raised. George Hammond and later Angelo Lamola conducted extensive negotiations with publishers and the other two fraternal organizations, but resolution of the matter, in spite of Angelo's skilled, dedicated efforts, were delayed and left for the incoming executive to bring to a resolution.

In conclusion, I wish to state that it was an honor and a privilege to serve the photochemistry community in the Americas by being associated with the I-APS. Creating the I-APS was a collaborative undertaking by many outstanding colleagues and I regret to say that not everyone who should have been acknowledged are mentioned here in this very brief account of the early days of the I-APS.

I thank everyone who participated with me in the enterprise for their trust, confidence and enthusiastic contributions, and wish the Society and its members the best of good luck in further successes and achievements in their professional endeavors.

Otto P. Strausz

Glossary of Terms used in Photochemistry

The third version of the **Glossary of Terms used in Photochemistry** (IUPAC Recommendations 2006) is now printed: *Pure Appl. Chem.* **79**, 293-465 (2007). Many colleagues collaborated towards the completion of this Document and I deeply thank everyone for their patience and efforts. In particular I would like to acknowledge the work of the members of the Sub-Committee of Photochemistry of IUPAC. They looked several times at the **Glossary** with great care and dedication. Whenever the collaboration of experts in one field or the other was needed, I always found colleagues ready to collaborate. For me, it was a very rewarding and learning experience.

In many cases long discussions and agreements were needed. We started the elaboration of this document in June 2002. After submission to IUPAC in October 2005, 15 reviewers looked at the document and sent their comments; 25 pages of comments were compiled and were answered. As said in the Introduction to the **Glossary**, definitions come from and are used in very different working areas, as every photochemist knows. Thus, in many cases it was absolutely necessary to reach agreements. In addition, and especially with the terms related to radiation units, we had to adjust ourselves to documents already agreed upon by scientific communities in many Countries and published by International organizations.

This **Glossary** should also be very useful for Photobiologists. In fact, many photobiologists collaborated in the discussions and elaborations for this document.

I do hope that this **Glossary** will be useful and I am sure that it will be subjected to modifications and expansions in the future, as long as Photochemistry keeps being an expanding and lively science.

When adding the references to many terms in the **Glossary** (the previous versions only had some general references) we tried to refer to the original literature (especially in the Name terms) as well as to modern literature. Thus, there is also a historical flair in this document.

This is an example of a joint effort of the Photochemical Community, framed within the IUPAC structures. I strongly encourage everyone to get engaged in the work of IUPAC and to materialize projects that could be useful for our and also other communities using photochemical concepts and tools.

At the moment I am the chairwoman of the Sub-Committee of Photochemistry of IUPAC, housed in the Organic and Biomolecular Chemistry Division of IUPAC. In that Division, I am the German representative. My 2 x 2-years terms as Titular Member are over and cannot be renewed. In the near future, it would be important that younger interested colleagues take the banner and keep these activities going. The Photochemical Societies should suggest a name to replace me !!

Please, refer to the **Glossary** whenever you use it. You may copy it and distribute it as you wish, as long as you refer to the publication:

“Glossary of Terms used in Photochemistry (IUPAC Recommendations 2006)”, *Pure Appl. Chem.* **79**, 293-465 (2007),
http://iupac.org/publications/pac/new/article?article_id=7903x0293

So, have fun with the **Glossary**.

Silvia Braslavsky

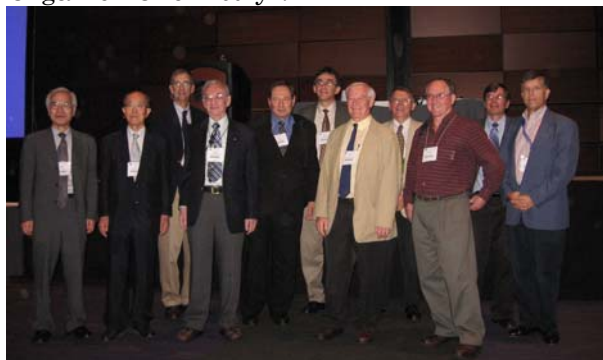
Max-Planck-Institut für
Bioanorganische Chemie

Reports from 2007 Photochemical Meetings

Special Symposium "60 Years of Physical Organic Chemistry" honoring I-APS member, Prof. Howard E. Zimmerman was held at the Boston ACS Meeting on Wednesday, August 22.

The symposium was organized by David Crumrine, Steven Fleming and Laren Tolbert and included a distinguished selection of speakers: Marye Anne Fox, Rich Givens, Masahiro Irie, Hizu Iwamura, Andrei Kutateladze, Fred Lewis, Josef Michl, Al Padwa, Jim Pincock, Dave Schuster, Laren Tolbert and Howard Zimmerman.

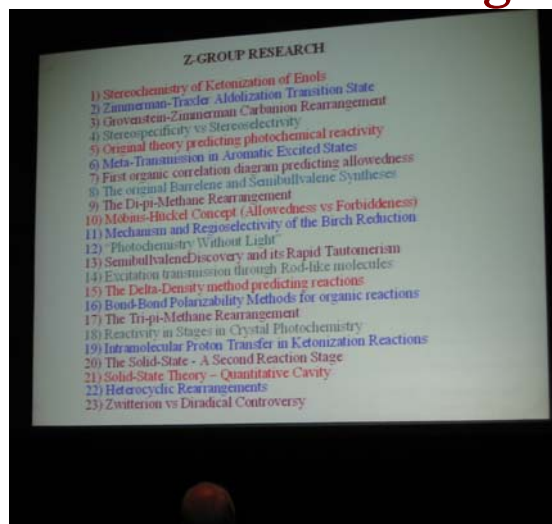
Other former members of the Zimmerman group and friends presented posters at the Tuesday evening poster session "Physical Organic Chemistry".



Speakers and organizers for the symposium



Howard Zimmerman and I-APS Fellow Dave Schuster



Research is still going strong in the Z-group!



Heated scientific discussions continued through the day ...



... and night.



This symposium provided a great opportunity to discuss science and reconnect with friends and colleagues!

2007 Gordon Photochemistry Conference on Photochemistry was chaired by Linda Johnston and was held at Bryant University Smithfield, RI from July 8-13. The vice chairs were Michael R. Wasielewski and Bruce A. Armitage.

SUNDAY

On Sunday night, July 8, **Linda Johnston** at the National Research Council of Canada kicked off the Photochemistry Gordon Conference by chairing the first session. The first talk of the Conference was given by **Richard Givens** from the University of Kansas. Richard presented the development of photoremovable protecting groups for reagents and biological substrates.

Neil Branda from Simon Fraser University showcased the broad applications of 1,2-dithienylethylene-based photochromes.

MONDAY

Supramolecular photochemistry was the focus of the session on Monday morning chaired by Andrei Kutateladze from the University of Denver. The first talk of the session was presented by **Cornelia Bohne** from the University of Victoria. In her lecture, Cornelia described how natural supramolecular constructs such as bile salt and serum albumin could be used to impact the regio- and stereoselectivity in a photochemical reaction.

Linda Shimizu from the University of South Carolina followed up with a presentation on the photodimerization in the presence of porous self-assembled bis-urea macrocycles.

V. Ramamurthy from the University of Miami described the remarkable reactivity control by confining the reaction within the boundary of a molecular capsule. Extensive NMR, fluorescence, and phosphorescence spectroscopic experiments were conducted to reveal the mechanistic details.

Jochen Mattay from Universität Bielefeld in Germany talked about photoswitching host-guest interactions on surface on a single molecule level.

The evening session was focused on the biological applications of photochemistry. The discussions were led by Fred Lewis from Northwestern University. **Tetsuro Majima** from Osaka University presented the study on one-electron sensitized oxidation and charge transfer in DNA. Sequence-selective mechanisms such as G-hopping and A-hopping were scrutinized.

Ana Moore from Arizona State University gave a passionate presentation on solar energy conversion to electrochemical energy using bioinspired strategies.

The final presentation of the day was given by **Anny Slama-Schwok** from Ecole Polytechnique in France. The application of nanotrigger to photo-initiation of the endothelial NO-synthase activity was described.

TUESDAY

On Tuesday morning the session on spectroscopy and dynamics was led by Glen Loppnow at University of Alberta. Before the presentations, Glen reminded everybody of the 18th I-APS Winter Conference to be held in Tampa, Florida from Jan. 3-6, 2008.

Erik Nibbering from Max-Born Institute described the applications of femtosecond UV/vis-pump, IR probe spectroscopy in the first presentation. Taking advantage of the rich vibrational patterns that are highly

specific to structural details, ultrafast infrared spectroscopy may provide unique transient structural information in studying the dynamics of chemical reactions.

John Simon from Duke University presented the applications of free electron laser photoelectron emission microscopy to the studies of melanosomes. At the end of his talk, John told the audience that he was stepping down as the Editor in Chief of Photochemistry and Photobiology later this year. The search for a new Editor in Chief has started.

Albert Stolow from the National Research Council of Canada discussed the applications of femtosecond time-resolved photoelectron spectroscopy for elucidating the ultrafast dynamics of non-adiabatic photochemical reactions and their quantum control.

Todd Martinez from the University of Illinois at Urbana-Champaign described the dynamics of photochemistry in DNA photodamage from a theoretical perspective. Quantum chemistry and first principles quantum molecular dynamics methods were used to explain the multicomponent decays of excited uracil and thymine observed using ultrafast spectroscopy.

Valeria Kleiman from the University of Florida detailed her studies on the mechanisms of ultrafast energy transfer in unsymmetrical systems which have potential applications in photonics.

In the evening, Linda Peteanu from Carnegie Mellon led a discussion on single molecule spectroscopy. **Peter Lu** from Bowling Green presented the studies on protein conformational dynamics using single molecular spectroscopy.

Gonzalo Cosa from McGill University reported studies of fluorescence resonance energy transfer in conjugated polymers encapsulated in liposomes.

Marcia Levitus from Arizona State University made interesting observations of how the photophysical properties of molecules attached to DNA molecules depend on their specific location on the strand.

WEDNESDAY

The Wednesday morning session titled

“photochemistry on the nanoscale” was chaired by Mike Wasielewski from Northwestern. The first speaker was **Moungi Bawendi** who, after an introduction on the structures of nanocrystal quantum dots spoke about their unique photophysical properties and their potential in applications such as light-emitting devices and photovoltaic conversion.

David Spry from Michael Fayer’s group at Stanford presented his study on the ultrafast dynamics of the excited state proton transfer (ESPT) in nanoconfined systems.

Daniel Falvey from the University of Maryland described the photoinduced electron transfer reactions in ionic liquids and on nanoparticles in the first part of his talk. In the second half of Dan’s presentation, sensitization-driven caging strategy was introduced.

In a presentation given by **Gerald Meyer** from Johns Hopkins, photodriven multi-electron transfer reactions (MET) and their applications in reducing organohalide pollutants were described.

In the evening, Steve Fleming from Brigham Young led a session on photochemical reactions and mechanisms. **John Toscano** from Johns Hopkins spoke on the applications of transient IR spectroscopy to the studies of important reactive intermediates in atmospheric chemistry.

Malcolm Forbes from UNC Chapel Hill showcased the broad application scope of time-resolved electron paramagnetic resonance spectroscopy (TREPR). TREPR is able to detect and study free radicals in sub-microsecond timeframe. Therefore, it has been applied in a variety of applications including the studies of the effectiveness of different sunscreens.

Vladimir Popik from the University of Georgia spoke about photochemically controlled thermal Bergman cyclization as a foundation for photodynamic therapy.

Finally to conclude the evening session, **Jack Saltiel** from Florida State discussed intricate mechanistic details involved in

cis-trans photoisomerization.

THURSDAY

The theme of the morning session on the last day of the Conference was “fluorescent biosensors”. Bruce Armitage from Carnegie Mellon led the discussion. **Alan Waggoner**, also from Carnegie Mellon, described a creative method to study protein interactions.

The only industrial speaker at the Conference, **Miaomiao Wang** from Investigen Inc., presented the results of their Smart DNA Assay for rapid and sensitive detection of genomic DNA.

In the next presentation by **Nancy Greenbaum** from Florida State University, the application of luminescence resonance energy transfer to identify the locations of site-bound metal ions in the snRNA complex was described.

Clemens Burda at Case Western Reserve talked about using quantum dot-organic dye

(e.g. phthalocyanine) conjugate as triplet sensitizers in photodynamic therapies.

Ken Lo from City University of Hong Kong presented their studies on using luminescent complexes as probes for the detection of biological molecules.

Rene Janssen from Eindhoven University of Technology described their progress toward the production of efficient organic solar cells.

Kirk Schanze from the University of Florida discussed the applications of organometallic polymers as molecular wires for exciton and charge transport.

Evgueni Nesterov from Louisiana State University discussed applications of temperature tuned electron transfer and fluorescence.

Lei Zhu (Florida State University)

Symposium Announcements

18th I-APS Winter Conference



Abstract submission deadline is Nov. 15, 2007

The conference will be held at the [Sirata Beach Resort and Conference Center](#) in St. Petersburg, Florida. The program will include both invited and a limited number of contributed talks that span membership interests in the photosciences including organic, physical, inorganic, biological, and materials photochemistry. Conference Registration Deadline: **November 15, 2007** The meeting will begin with registration on the afternoon of Thursday, January 3, 2008.

The first scientific session will begin at 7 pm on Thursday, January 3 and the last scientific session will finish at noon on Sunday, January 6.

Invited speakers include members from the I-APS, and we anticipate that there will be many talks that will be of interest to the membership of the society. Society members are encouraged to submit abstracts for presentation at the meeting. For more information see http://www.i-aps.org/18th_wintconf/mainpage.htm.

Invited Speakers:

Bruce Armitage (Carnegie Mellon University)
Mauricio S. Baptista (University of São Paulo)
Juan Bisquert (Universitat Jaume I)
Karen Brewer (Virginia Tech)
Phil Castellano (Bowling Green State University)
Elena Galoppini (Rutgers University)
Miguel Garcia-Garibay (UCLA)
Anna Gudmundsdottir (University of Cincinnati)
William Jenks (Iowa State University)
Paul Jones (Wake Forest University)
Valeria Kleinman (University of Florida)

Dongho Kim (Yonsei University)
Bob Liu (University of Hawaii at Manoa)
Glen Loppnow (University of Alberta)
Matthew Platz (Ohio State University)
Garry Rumbles (NREL)
Jack Saltiel (Florida State University)
Greg Scholes (University of Toronto)
Mark Workentin (University of Western Ontario)

Symposium Organizers:

Pedro F. Aramendia (University of Buenos Aires)
Paul F. Barbara (University of Texas)
Devens Gust (Arizona State University)
Joseph T. Hupp (Northwestern University)
Linda Johnston (National Research Council)
Linda A. Peteanu (Carnegie Mellon University)
Frank H. Quina (University of Sao Paulo)
Villy Sundström (Lund University)
John P. Toscano (Johns Hopkins University)
Claudia Turro (Ohio State University)

Acknowledgment is made to the Donors of The American Chemical Society Petroleum Research Fund for partial support of this symposium.



Molecular/Nano-Photochemistry, Photocatalysis and Solar Energy Conversion SOLAR'08 will be held in Cairo, Egypt on February 24 – 28, 2008.

Detailed information can be found at <http://www.photoenergy.org/Welcome.html>.

Abstract submission deadline is 9 November, 2007.

The Solar conference series, started in 1991, provides a forum for researchers interested in fundamental and applied aspects of photochemistry. The Solar Conference recognizes that successful photochemical

applications go hand in hand with advancement of fundamental understanding of photoinduced processes and excited states.

Speakers:

Detlef Bahnemann (Germany)
Ulrike Diebold (U.S.A.)
Leif A. Eriksson (Sweden)
Masamichi Fujihira (Japan)
Martin Green (Australia)
Jean-Marie Herrmann (France)
Nam-Gyu Park (Korea)
Kyung B. Yoon (Korea)
Minjoong Yoon (Korea)
Carlo Adamo (France)
Seong Soo Choi (Korea)
Sylvie Lacombe (France)
Shigeo Murata and M. Tachiya (Japan)
Werner Nau (Germany)
Michael Oelgemoeller (Ireland)
James McLeskey Jr. (USA)
Soo Young Park (Korea)
Nino Russo (Italy)
Markus Sauer (Germany)
Anatoly Tsygankov (Russia)
Veronica Vaida (U.S.A.)
A. Vlcek, Jr. (UK)
Klaas Zachariasse (Germany)
Mohamed M. Abdel-Mottaleb and M. S. Abdel-Mottaleb (Egypt)
Triantafyllos Albanis (Greece)
Jean-Marc Chovelon (France)
Christos Comninellis (Switzerland)
Jordi Fraxedas (Spain)
Gyozo Garab (Hungary)
Hoda S. Hafez, Mona M. Saif and S. Abdel-Mottaleb (Egypt)
Jerzy Karpiuk (Poland)
Yong-Rok Kim (Korea)
Latika Menon (USA)
Yuri Pleskov (Russia)

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Dr. M. M. S. Abdel-Mottaleb [SabryCorp, Egypt/Germany]

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 Minjoong Yoon [Korea]
 Klaas Zachariasse [Germany]



Annual Spring Meeting of the Materials Research Society

Symposium BB: Hybrid Functional Materials for Optical Applications

Call for abstracts - Deadline Nov. 1, 2006

This symposium is focused on a wide range of materials for linear and non-linear optical applications. Contributions in the area of basic science of optical materials as well as applications are encouraged. For more information concerning the symposium which will be held in San Francisco see: www.mrs.org/meetings/, and/or contact kschanze@chem.ufl.edu.

Invited speakers include members from the I-APS, and we anticipate that there will be many talks that will be of interest to the membership of the society. Society members are encouraged to submit abstracts for presentation at the meeting

Invited Speakers:

H. Agren (Royal Inst. Tech. Sweden)
 U. Bunz (Ga. Tech.)
 L. Dalton (U. Washington)
 N. Halas (Rice U.)
 A. Holmes (U. Melbourne)
 J. Hupp (Northwestern U.)
 R. Janssen (Eindhoven U. Tech.)
 G. Meyer (Johns Hopkins)
 C. Murphy (U. South Carolina)
 A. Scherer (Cal. Tech.)
 V. Shalaev (Purdue U.)
 G. Shvets (U.T. Austin)
 M. Thompson (U. Southern Calif.)
 S. Tolbert (UCLA)
 Y. Xia (U. Washington)
 V. Yam (U. Hong Kong)

Symposium Organizers:

A. Cartwright (U. Buffalo)
 A. Kohler (Potsdam)
 T. M. Cooper (AFRL, Wright Patterson-AFB)
 K. Schanze (U. Florida)



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* Name of current advisor _____

Signature _____ Date _____

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Professor Steven Fleming
 Inter-American Photochemical Society
 Department of Chemistry
 Brigham Young University
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<input type="checkbox"/> Polymer (CY)	<input type="checkbox"/> Vision (VS)