

## ICONO10/ICOPE 2008 Conference Schedule

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### Sunday, May 18<sup>th</sup>

5:00-7:00 pm **Registration, La Terazza**  
(Registration after Sunday: Ballroom South/Stiha Room)

7:00-9:30pm **Welcome Reception, La Terazza**

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### Monday, May 19<sup>th</sup>

#### *Session M1 8:30-10:00am* *Electro-Optics I*

8:30-8:45am **Opening ICONO10/ICOPE 2008**

8:45-9:15am **Systematic optimization of organic electro-optic materials and integration into silicon photonics**  
*L. R. Dalton, Invited Speaker*

9:15-9:45am **Supramolecular photonics: Molecular self-assembly and controlled lattice hardening for electro-optic coefficients beyond 450pm/V**  
*A. K. Y. Jen, Invited Speaker*

9:45-10:00am **Poling of dipolar chromophores in block copolymer domains**  
*P. Gopalan, Contributed Talk*

10:00-10:30am **Break**

#### *Session M2 10:30-12:30pm* *Structured and Guiding Media*

10:30-11:00am **Kinetic Monte Carlo study of diffraction grating recording/erasure in DNA-based azo-dye systems**  
*A. Mitus, Invited Speaker*

11:00-11:30am **Carbon nanotube – polymer composites for photonic applications**  
*W. J. Blau, Invited Speaker*

11:30-12:00pm **Photo patterning of fluorescent polymers**  
*E. Kim, Invited Speaker*

12:00-12:15pm **What was that green visual sensation?**  
*A. Knoesen, Contributed Talk*

12:15-12:30pm **Active polymer-based surface plasmon-polariton waveguides**  
*W. Park, Contributed Talk*

12:30-1:30pm **Conference Lunch, Ballroom North**

**Session M3 1:30-3:30pm**

**Chiral/ Two Photon I**

- 1:30-2:00pm **Second harmonic generation-circular dichroism in thin films of chiral polythiophenes**  
*V. Rodriguez, Invited Speaker*
- 2:00-2:30pm **Second harmonic generation in chiral materials**  
*T. Verbiest, Invited Speaker*
- 2:30-3:00pm **Design, synthesis and characterization of efficient two-photon absorption chromophores/fluorophores and their uses in bioimaging**  
*J.-F. Nicoud, Invited Speaker*
- 3:00-3:15pm **Structure-property relationship of two-photon absorption of multiply fused annulenes and the related compounds**  
*K. Kamada, Contributed Talk*
- 3:15-3:30pm **Targeted two-photon photodynamic therapy for the noninvasive treatment of lung cancer: A new paradigm for outpatient cancer therapy**  
*C. W. Spangler, Contributed Talk*
- 3:30-4:00pm **Break**

**Session M4 4:00-5:30pm**

**Chi(3) and Nonlinear Absorption**

- 4:00-4:30pm **Structure-properties relationships for third-order nonlinear optics**  
*S. R. Marder, Invited Speaker*
- 4:30-5:00pm **White light continuum z-scan for nonlinear optical spectroscopy**  
*E. Van Stryland, Invited Speaker*
- 5:00-5:30pm **Using the dipole-free sum-over states expression to predict two-photon absorption spectra from hyper-Rayleigh scattering**  
*M. G. Kuzyk, Invited Speaker*

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**Tuesday, May 20<sup>th</sup>**

**Session T1 8:30-10:00am**

***Organic Laser***

10:25-10:55am **Organic crystalline and polymeric materials for electro-optical microring resonators**

*P. Günter, Invited Speaker*

10:55-11:25am **Organic semiconductor optical amplifiers and lasers**

*I. D. W. Samuel, Invited Speaker*

11:25-11:40am **Melt-Processed All-Polymer Distributed Bragg Reflector Lasers**

*K. D. Singer, Contributed Talk*

11:40-11:55am **Scattering type polarizer of fiber/matrix composites and methods to enhance polarization efficiency**

*K. Totani, Contributed Talk*

10:00-10:25am **Break**

**Session T2 10:25-12:00pm**

***Electroluminescence***

10:25-10:55am **Up-converted emission in an organic electroluminescent diode: the need for a two-electron mechanism**

*J.-M. Nunzi, Invited Speaker*

10:55-11:25am **The use of Ir and Pt complexes in organic LEDs and solar cells**

*M. Thompson, Invited Speaker*

11:25-11:40am **Photoinduced processes in supramolecular polymers**

*A. Priimagi, Contributed Talk*

11:40-11:55am **A display device with dual electroluminescence and electrochromic functions**

*K.-Y. Wong, Contributed Talk*

12:00-1:30pm **Lunch Out**

**Session T3** 1:30-3:30pm  
**Two Photon II**

- 1:30-2:00pm **Two-photon engineering of three-dimensional micro/nano structures: Photopolymerization, photoreduction and photoisomerization**  
*S. Kawata, Invited Speaker*
- 2:00-2:30pm **Two-photon orientation and nanofabrication in photoresponsive polymers**  
*Z. Sekkat, Invited Speaker*
- 2:30-3:00pm **Organic-inorganic nanocomposites and  $\pi$ -conjugated molecules for photodetection and two-photon stereolithography**  
*K.-S. Lee, Invited Speaker*
- 3:00-3:15pm **New glutamate photolabile protecting groups: Ultra-efficient two-photon uncaging**  
*F. Bolze, Contributed Talk*
- 3:15-3:30pm **Two-photon FRET-based photochromic 3D optical data storage**  
*K. D. Belfield, Contributed Talk*
- 3:30-4:00pm **Break**

**Session T4** 4:00-5:30pm  
**Photorefractives**

- 4:00-4:30pm **Novel polymers for 3D updatable display and EO modulators**  
*N. Peyghambarian, Invited Speaker*
- 4:30-5:00pm **Supramolecular Photonics Systems for Information Manipulation**  
*T. Wada, Invited Speaker*
- 5:00-5:15pm **Photorefraction of liquid crystals in Ru dye-sensitized TiO<sub>2</sub> layers**  
*N. Kim, Contributed Talk*
- 5:15-5:30pm **Reversible thermoresponsive on-off recording of strong long lived room temperature phosphorescence in organic materials under atmosphere**  
*S. Hirata, Contributed Talk*

**Posters** 6:00-8:00pm

- 6:00-8:00pm **All Posters, New Mexico Room**  
See the separate list of posters.

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**Wednesday, May 21<sup>st</sup>**

**Session W1 8:30-10:00am**

**Nonlinear Optics**

- 8:30-9:00am **Organic Photonics Materials for All-Optical Signal Processing and Optical Limiting**  
*J. Perry, Invited Speaker*
- 9:00-9:30am **Organic spintronics: A new molecular electronic field**  
*Z. V. Vardeny, Invited Speaker*
- 9:30-9:45am **Insight from DFT calculations for enhancing the first hyperpolarizability of push-pull dyes**  
*G. A. Lindsay, Contributed Talk*
- 9:45-10:00am **Fine-tuning of density functional theory to describe symmetry breaking and charge transfer in conjugated molecules and noncovalent dimers**  
*A. E. Masunov, Contributed Talk*

10:00-10:30am **Break**

**Session W2 10:30-12:00pm**

**Electro-Optics II/THz**

- 10:30-11:00am **Caveats in reflective EO measurements and comparison with ATR**  
*W. N. Hermann, Invited Speaker*
- 11:00-11:30am **Status of photonics polymer and its applications**  
*Y. Koike, Invited Speaker*
- 11:30-11:45am **Improving stilbazolium salts for the emission and detection of few-cycle terahertz pulses**  
*M. Stillhart, Contributed Talk*
- 11:45-12:00am **Optical-pump THz-probe spectroscopy of above and below gap excitations in P3HT**  
*P. D. Cunningham, Contributed Talk*

**Wednesday afternoon**

- 1:00-7:00pm **Conference Tour, Bandelier National Monument:** Separate registration is required for this tour. Lunch is provided. Leave 1:00 sharp from hotel.

**Golf**

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**Thursday, May 22<sup>nd</sup>**

**Session R1      8:30-10:00am**  
**Charge Transport Phenomena I**

- 8:30-9:00am    **High performance organic field-effect transistors with low-cost silver or copper as electrodes**  
*Y. Liu, Invited Speaker*
- 9:00-9:30am    **Self-organizing organic nano-architectures for optoelectronic devices**  
*V. Duzhko, Invited Speaker*
- 9:30-9:45am    **The source of the charge transport activation energy in molecularly doped polymers**  
*L. B. Schein, Contributed Talk*
- 9:45-10:00am   **Ordering and its influence on charge-transport at the example of a bis(dithienothiophene) derivative**  
*C. Hunziker, Contributed Talk*

10:00-10:30am **Break**

**Session R2      10:30-12:00pm**  
**Charge Transport Phenomena II**

- 10:30-11:00am **Recent advances in multilayer molecular organic solar cells**  
*B. Kippelen, Invited Speaker*
- 11:00-11:30am **Photoexcited charge carrier and exciton dynamics in organic thin films**  
*O. Ostroverkhova, Invited Speaker*
- 11:30-11:45am **On the origin of the high photoconductivity of rubrene single crystals**  
*I. Biaggio, Contributed Talk*
- 11:45-12:00pm **Solution processed high performance organic thin film transistors**  
*H. A. Becerril*
- 12:00-1:30pm   **Lunch Out**

***Session R3 1:30-3:30pm***

***A. F. Garito Symposium***

- 1:30-2:00pm *F. Lipscomb, Invited Speaker*  
No additional information available at this time
- 2:00-2:30pm **Nonlinear optics, lasers, optical fibers, photonics ...The seminal contributions of Tony Garito**  
*A. Persoons, Invited Speaker*
- 2:30-3:00pm **Organic crystals for photonics applications**  
*H. Nakanishi, Invited Speaker*
- 3:00-3:30pm *T. Kaino, Invited Speaker*  
No additional information available at this time
- 3:30-4:00pm **Break**

***Session R4 4:00-5:30pm***

***A. F. Garito Symposium***

- 4:00-4:30pm **Magneto-optic polymers and their device applications**  
*R. Norwood, Invited Speaker*
- 4:30-5:00pm **Ultralow loss waveguides based on perfluoropolymers**  
*A. Yeniay, Invited Speaker*
- 5:00-5:30pm **Plasmonic enhancement of the second order nonlinear optical response of ionic self-assembled multilayers**  
*R. Heflin, Invited Speaker*

***Banquet 7:30-9:00pm***

- 7:00-9:30pm **Conference Banquet, Ballroom North**

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**Friday, May 23<sup>rd</sup>**

**Session F1 8:30-10:00am**  
**Charge Transport Phenomena III**

8:30-9:00am **Self assembling light harvesting systems from chemically modified viral capsid monomers**  
*M. Francis, Invited Speaker*

9:00-9:30am *Z. Kafafi, Invited Speaker*  
No further information available at this time.

9:30-10:00am **Bandlike transport in organic molecular crystals revealed by time-resolved terahertz spectroscopy**  
*F. Hegmann, Invited Speaker*

10:00-10:30am **Break**

**Session F2 10:30-12:00pm**  
**Bandgap Systems**

10:30-11:00am **Active self-assembled photonic crystals**  
*K. Clays, Invited Speaker*

11:00-11:30am **Polymer based nanophotonics**  
*M. Eich, Invited Speaker*

11:30-11:45am **Surface contributions to the optical second harmonic generation from gold and silver metallic particles**  
*P. F. Brevet, Contributed Talk*

11:45-12:00pm **Femtosecond laser assisted self written waveguide**  
*O. Sugihara, Contributed Talk*

12:00-1:30pm **Lunch**

***Session F3 1:30-3:30pm***

***Emerging Topics***

- 1:30-2:00pm **Nonlinear optical ellipsometry of chiral films**  
*G. J. Simpson, Contributed Talk*
- 2:00-2:30pm **Multiphoton fabrication with nanometer scale spatial resolution and applications for micromachines and microdevices**  
*X.-M. Duan, Invited Speaker*
- 2:30-2:45pm **The effect of jetting conditions on the characteristics of OTFT and organic solar cell**  
*C. Lee, Contributed Talk*
- 2:45-3:00pm **In a new light: design of illuminants to reduce photochemical degradation of works of art**  
*C. Dirk, Contributed Talk*
- 3:00-3:15pm **Dye-doped DNA-based material for dynamic holography and lasing applications**  
*J. Mysliwiec, Contributed Talk*
- 3:15-3:30pm **Determination of charge carriers transport lengths in bipolar organic photoconductor by non-steady-State photo-EMF technique**  
*S. Mansurova, Contributed Talk*

***Closing ICONO10***

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**POSTER SESSION**  
**TUESDAY, MAY 20, 6-8pm**  
**New Mexico Room**

**Second-Order Nonlinear Optics**

**Definition of critical structure/function relationships for optimizing the performance of organic electro-optic materials**

*L. R. Dalton*

**Sum rules, quantum limits and the optimization of the first hyperpolarizability**

*J. Pérez-Moreno*

**Testing theories of fundamental limits of nonlinear susceptibilities with Monte Carlo studies**

*Mark C. Kuzyk*

**Reliability of density functional theory for estimation of the molecular hyperpolarizability**

*K. Y. Saponitsky*

**Photoactive cross-linkable polymers for nonlinear optical applications**

*B. M. Rawlings*

**Electro-optic active single crystal waveguides of DAT2 grown from the melt**

*H. Figi*

**Absorption studies of polymer-dye films oriented by corona poling**

*N. A. Shadbad*

**Dispersion of the second order susceptibility of a chiral helicene**

*S. Foerier*

**New nonlinear optical polyene crystals for VLSI photonics and THz applications**

*O-P. Kwon*

**Structural properties of zwitterionic chromophores and their precursors**

*A.J. Kay*

**Orientational relaxation in poled PS-b-P4VP electro-optic block copolymers**

*D. J. McGee*

**Highly nonlinear optical configurationally locked triene crystals based on 3,5-dimethyl-2-cyclohexen-1-one**

*S.-J. Kwon*

**Tuning the SHG properties of thin films of polythiophene**

*I. Asselbergh*

**Photochemical stability of nonlinear optical single crystals and guest-host polymers**

*M. Jazbinsek*

**Polymeric electro-optic microring resonators based on Charon couplers**

*M. Jazbinsek*

**Electro-optic channel waveguides in organic crystals fabricated by direct electron beam structuring**

*M. Jazbinsek*

**Novel stilbazolium salts for electro-optics and THz wave applications**

*M. Jazbinsek*

**15 THz emission and detection using organic nonlinear optical polymers at communication wavelengths**

*C. McLaughlin*

### **Third-Order Nonlinear Optics**

**Comparison of z-scan and THG derived nonlinear index of refraction in selected organic solvents**

*I. Rau*

**Optimizing the third-order optical polarizability of small organic molecules through donor-acceptor substitution**

*J. C. May*

**Dioxaborine polymethine dyes for all-optical signal processing**

*J. Matichak*

**Long-range corrected DFT calculations of static second hyperpolarizabilities of singlet diradical systems**

*R. Kishi*

**Static polarizabilities and second hyperpolarizabilities of one-dimensional hydrogen-bonded 4-pyridones**

*R. Kishi*

**Theoretical study on the second hyperpolarizability of open-shell-singlet diphenalenyl radical dimer**

*R. Kishi*

**Calculation of double excitations and transition dipoles in linear polyenes with time-dependent density-functional theory**

*Mikhailov*

**Vapor-deposited supramolecular assemblies with high third-order optical nonlinearities and high optical quality**

*B. Esembeson*

**Study of the ultra-fast nonlinear optical response of three derivatives of an amino-triazole push-pull system**

*L. Tamayo-Rivera*

**Third order nonlinear optical properties of donor substituted chalcone**

*H. J. Ravindra*

### **Multiphoton Absorption**

**X-Ray diffraction and two photon absorption studies of arylidenepiperidone derivatives**

*T. L. Kinnibrugh*

**Fabrication of a clay and two-photon absorptive dyes composites**

*Y. Suzuki*

**Linear and nonlinear photophysics and optical limiting of new fluorenylperylene diimides**

*M. V. Bondar*

**Effect of dihydro-benzo-furoindolium terminal groups on linear and excited state absorption of near IR cyanine dyes**

*O. V. Przhonska*

**Light induced changes in the optical properties of (2E)-1-(3,4 dimethoxyphenyl)-3-(4-methoxyphenyl)prop-2-en-1-one**

*K. N. Sharafudeen*

**Nonlinear absorption of extended chromophores**

*B. Valle*

**Derivatives of perylene: Evidence of nonlinear scattering, absorption and emission**

*W. Blau*

**Synthesis and properties of Fullerene derivatives for optoelectronic applications**

*E. Y. Park*

**Electronic and vibronic contributions to two-photon absorption (TPA) in donor-acceptor-donor squaraine chromophores**

*S. Ohira*

**Two-photon absorption cross-section of an organic dye in solid state**

*S. Hirakawa*

**Studies on singlet oxygen generation in organic dye induced by light-irradiation**

*M. Fukuoka*

**Nonlinear absorption studies in p-(N,N-dimethylaminophenyl)-2-chloro-5-nitro-benzoylhydrazone**

*K. Chandrasekharan*

**Synthesis and application of novel fluorenyl-based two-photon absorbing PAG's in 3D microfabrication**

*K. D. Belfield*

**Theoretical study on two-photon absorption properties of extended p-conjugated systems: two-dimensional conjugated quadrupolar chromophores**

*K. Ohta*

**Predictions of two photon absorption profiles using time-dependent density functional theory combined with SOS and CEO formalisms**

*S. Tafur*

**Development and application of density functional theory in design of two-photon absorbing photochromic materials for optical data storage**

*E. Masunov*

**Optical Recording**

**Density functional theory in design of fatigue-resistant photochromic materials for optical switching and data storage**

*P. Iqbal*

**Kinetic Monte Carlo study of diffraction grating recording/erasure in DNA-based azo-dye systems**

*C. Mitus*

**Influence of chromophore content on the photorefractivity in poly[methyl-3-(9-carbazole)propylsiloxane]-based organic polymer composites**

*J.-W. Oh*

**Electronic Properties, Materials and Devices**

**High performance n-channel organic field-effect transistors**

*B. Kippelen*

**Solution processed high performance organic thin film transistors**

*H. A. Becerril*

**Self-assembled monolayers of dipolar chromophores for photoinduced charge transfer in organic field effect transistors**

*P. Paoprasert*

**Determination of charge carriers transport lengths in bipolar organic photoconductor by non-steady-state photo-EMF technique**

*M. Espinosa*

**Metallic transport in polyaniline prepared by self-stabilized dispersion polymerization**

*E.-M. Kim*

**The contribution of energetic disorder to charge transport in molecularly doped polymers**

*S. Mansurova*

**Synthesis of functionalized poly(carbazole derivatives) containing Fullerene by anionic polymerization for electrical bistable switching**

*N.-G. Kang*

**Partially fluorinated cofacial polynuclear hydrocarbon organic semiconductors**

*R. J. Twieg*

**KPFM imaging of structured organic photovoltaic devices with spatial distribution of donor and acceptor**

*S. Watanabe*

**Structural and magnetic properties of PTCTE-based organic spin valves**

*I. Seguy*

### **Nanophotonics, sensors, emissive devices**

**Surface modifications for gold-based sensors**

*B. D. Spangler*

**Theory and simulation of relaxation and photoluminescence in PbSe and CdSe quantum dots**

*D. Kilin*

**Utilization of suspended core MPOF for evanescent field sensing and luminescent spectroscopy**

*J. Vanda*

**Modeling of Polymer Microcavity Lasers**

*Y. Wu*

**Near-infrared luminescent polymer waveguides and microlasers**

*M. Djiango*

**A novel synthetic route of luminescent nanoparticles in aqueous phase**

*J. H. Kim*

**Magneto-optic properties of magnetite nanoparticle/polymer composites and their device applications**

*Lopez-Santiago*