

# Mechanisms of Photoredox Catalysis (MoPC)

Organizers: Miguel Gonzalez, Bryan Kudisch, and Qilei Zhu  
March 22-24, 2026

## Sunday AM

Georgia World Congress Center | C206

M. I. Gonzalez, B. Kudisch, Q. Zhu, Organizers | N. Kamboj, Presiding

**8:00 AM.** Hydrogen Isotope Exchange of Aromatic C(sp<sup>2</sup>)-H Bonds via Electron Donor-Acceptor Organic Photocatalysis. **Q. Zhu**

**8:30 AM.** Manganese(II) complexes for sustainable photochemistry. **D. Arias-Rotondo**

**9:00 AM.** Spin-state and reorganization energy considerations for metal-centered photoredox catalysis. B. Bowers, B. Pfund, H. Beissel, A. Ghosh, **J.K. McCusker**

**9:30 AM.** Redshifting photoredox catalysis. **T. Rovis**

**10:00 AM.** Break.

**10:20 AM.** Dissecting mechanistic pathways in photoredox catalysis: From radical cations to energy transfer shuttles. **L. Troian-Gautier**

**10:40 AM.** Photo-induced conformational gating in copper(I) complexes for charge separation and triplet-triplet annihilation upconversion. **N. Kamboj**, L.R. Urbain, H. Beissel, L. Olshansky

**11:00 AM.** Electro(photo)catalytic oxygen atom transfer from water using high-valent Os(VI)-dioxo complexes. **B.M. Hunter**

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M. I. Gonzalez, B. Kudisch, Q. Zhu, Organizers | A. Arshad, Presiding

**2:00 PM.** Mechanistic insight guiding photocatalyst design. **H. Sayre**

**2:30 PM.** Adaptive dynamic homogeneous photocatalysis. **B. Koenig**

**3:00 PM.** Photochemical processes in nickel-based cross-coupling catalysis. **R.G. Hadt**

**3:30 PM.** Elucidation of Fe decarboxylation photocatalysts for C–C bond formation.  
**L. Ackerman-Biegasiewicz**

**4:00 PM.** Break.

**4:20 PM.** Material-efficient robo-fluidic toolbox for automated photophysical characterization and systematic evaluation of Ru(II) photocatalysts in crossed [2 + 2] styrene cycloadditions. **A. Arshad**, R. Canty, E. Danilov, T.P. Yoon, M. Abolhasani, F.N. Castellano

**4:40 PM.** Mechanism and selectivity in photochemical, nickel-catalyzed cross-electrophile coupling to form C-heteroatom bonds. **S. Nahiyan**, J. Hall, P.M. Zimmerman, M.S. Sanford

**5:00 PM.** Spectroscopic analysis of reaction pathways and quantum yields in photocatalytic reactions. **T. Higashida**, Y. Tange, K. Sobue, K. Kawahara

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## Monday AM

Georgia World Congress Center | B217

M. I. Gonzalez, B. Kudisch, Q. Zhu, Organizers | O. S. Bokareva, Presiding

**8:00 AM.** Computational studies of bimolecular homolytic substitution reactions. **P. Liu**, G. Scofield, M. Madhusudhanan, S. Wang

**8:30 AM.** Leveraging inherent protein proximity via microenvironments mapping or next generation therapeutic development. **N. Fadeyi**

**9:00 AM.** Revealing photochemical pathways in Fe and Ni catalysts with femtosecond X-ray spectroscopy. **J. Vura-Weis**

**9:30 AM.** Ultrafast dynamics of photoredox catalysis of flavoenzymes. **D. Zhong**

**10:00 AM.** Break.

**10:20 AM.** Harnessing aryl sulfonates for carbon radical formation and intramolecular cyclization. **R.D. Quarels**

**10:40 AM.** Computational analysis of divergent HAT pathways in pyrimidopteridinetetraone photocatalysis. **O.S. Bokareva**, Z. Amanollahi, L. Lach, T. Taeufer, T. Vuong, J. Pospech

**11:00 AM.** Charge transfer mechanism and triple selectivity control of photoenzymes. **S.S. Dong**, G. Mondragón-Solórzano, F. Curtolo, B. Jayee

**11:20 AM.** Photoredox catalysis with spin magnetic field effects. **J. Yuen-Zhou**, Y. Rui Poh, A. Koner, M. Reitz

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## Monday PM

Georgia World Congress Center | B5 - EXHIBIT HALL ChemPod 4  
M. I. Gonzalez, B. Kudisch, Q. Zhu, Organizers | D. Leimkuhl, Presiding

**2:00 PM.** Mechanistic insights into symbiotic Cu(I)/Cu(II)-driven photocatalysis.

**F.N. Castellano**

**2:30 PM.** Unravelling mechanisms of photoredox catalysis with pulse radiolysis. L. Kannadi Valloli, **M. Bird**

**3:00 PM.** Coherent acoustic phonons and quantum control of photochemical reactions in solution. A. Heidbreder, C. DeWitt, C. Powell, **A. Bhattacharjee**

**3:30 PM.** Direct observation of transient radicals in photoredox catalysis by an advanced time-resolved epr technique. **X. Guo**

**4:00 PM.** Break.

**4:20 PM.** Measuring electron transfer rate constants with semiconducting electrodes under illumination. **D. Leimkuhl**, D.A. Peralta, M. Jackson

**4:40 PM.** Resolving complete photoinduced catalytic cycle of Irspdy utilizing double pump: multiple x-ray probe transient absorption spectroscopy. **J. Zhu**, A.B. Maurer, C. Liu, G. Doumy, A. March, X. Zhang

**5:00 PM.** Simulating photoproperties of electron donor-acceptor complexes with orbital optimized density functional theory. **D. Hait**

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## Tuesday AM

Georgia World Congress Center | B5 - EXHIBIT HALL ChemPod 1  
M. I. Gonzalez, B. Kudisch, Q. Zhu, Organizers | M. Eaton, R. Weiss, Presiding

**8:00 AM.** Iron complexes as photosensitizers and photocatalysts: A computational perspective. **E. Jakubikova**

**8:30 AM.** Photosensitization reactions enabled by mechanistic design. **T.P. Yoon**

**9:00 AM.** LMCT photoredox. **D.G. Nocera**

**9:30 AM.** Site-selective Photochemical C–H Functionalization through Solid-state Preorganization. **M.I. Gonzalez**

**10:00 AM.** Break.

**10:20 AM.** Old catalyst in a new light: Visible-light photodecarboxylative alkylation with ferricenium salts. **N.J. Logtenberg**, J. King, J.D. Soper

**10:40 AM.** Disentangling ultrafast branching pathways in ligand-to-metal charge transfer photocatalysts. **R. Weiss**, B. Kudisch

**11:00 AM.** Chemoselective photocatalytic C(sp<sup>3</sup>)–H functionalization enabled by terminal Cu–Cl sites in a metal-organic framework. **M. Eaton**, A.K. Ball, K. Doherty, S. Chen, D. Nakamura, T.J. Azbell, H.J. Kulik, P.J. Milner

**11:20 AM.** Color control in visible light photoredox Co–O<sub>2</sub>CR bond activation. **J.D. Soper**

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Georgia World Congress Center | B5 - EXHIBIT HALL ChemPod 1  
M. I. Gonzalez, B. Kudisch, Q. Zhu, Organizers | L. Sawyer, Presiding

**2:00 PM.** Ultrafast spectroscopic studies of the mechanisms of organic photoredox catalysis. **V. Huxter**

**2:30 PM.** Probing the mechanistic basis of unconventional photoreactivity. **O.S. Wenger**, B. Pfund, D. Schwarzer

**3:00 PM.** Excited state acridyl radicals - mechanisms and reactivity. **D.A. Nicewicz**

**3:30 PM.** Investigating photoredox-catalyzed cycloaddition reactions through the lens of time-resolved spectroscopy. **M. Sneha**, S. Mandal

**4:00 PM.** Break.

**4:20 PM.** Investigating the photocatalytic mechanism of Rhodamine 6G via ultrafast time-resolved spectroscopy. **L. Sawyer**, V. Huxter

**4:40 PM.** Polymer connectivity governs electrophotocatalytic activity in the solid state. **P.J. Milner**, J. Ling, A. Vonder Haar, K.Z. Colley, J. Kim, K. Doherty, Y. Wang

**5:00 PM.** Complementary strategies to extend excited-state lifetimes in copper(I)  $\beta$ -diketiminato isocyanide charge-transfer chromophores. **T.S. Teets**, D. Kim, A. Kumar, P.S. Kodithuwakku

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