

# Probing Chemical Reactions by Single-Molecule Spectroscopy

Virtual Conference, June 8<sup>th</sup>, 2021

Registration is required, register [here](#)

Organizers: Prof. Suzanne A. Blum (University of California, Irvine) & Prof. Randall H. Goldsmith (University of Wisconsin, Madison)

## Morning 1 - 08:00 US Central Time, 15:00 Central European Summer Time, 21:00 China Standard Time

- Prof. Suzanne Blum (UC Irvine, US), Prof. Randall Goldsmith (UW-Madison, US): **Welcoming Remarks**
- Prof. Steve Granick (Institute for Basic Science, KR): **Surprises and opportunities - the reaction intermediate problem**
- Prof. Weilin Xu (Changchun Institute Of Applied Chemistry, CN): **The Application of Single-Molecule Fluorescence Microscopy in Energy-related Electrocatalysis**
- Prof. Gregor Jung (Saarland University, DE): **Dual emissive fluorophores for probing chemical reactions**
- Prof. Wei Wang (Nanjing University, CN): **Imaging the temperature-induced phase transition of single nanoparticles**
- Prof. Ning Fang (Xiamen University, CN): **Single-Molecule Chemical Dynamics in Nanoconfinements and Defects**

## Morning 2 - 10:25 US Central Time, 17:25 Central European Summer Time, 23:25 China Standard Time

- Prof. Dominik Woell (RWTH Aachen University, DE): **Chemistry, Crosslinking, and Catalysis in Microgels investigated with Single Molecule Fluorescence-based Methods**
- Prof. Juan (Tito) Scaiano (University of Ottawa, CA): **Fiber glass catalysis. Real-time, single molecule visualization of Palladium catalytic centers during the reduction of nitro compounds**
- Prof. Dirk-Peter Herten (University of Birmingham, GB): **Fluorogenic click reactions – a close look into tetrazine chemistry**
- Dr. Jan Vogelsang (University of Regensburg, DE): **Picosecond time-resolved photon antibunching measures nanoscale exciton motion, annihilation, and the true number of chromophores**
- Prof. Suzanne Blum (UC Irvine, US), Prof. Randall Goldsmith (UW-Madison, US): **Discussion: Current Technical Challenges in Single-Molecule Investigations of Chemical Reactions**

## Afternoon 1 - 13:40 US Central Time, 20:40 Central European Summer Time, 02:40 China Standard Time

- Prof. Bert Weckhuysen (Utrecht University, NL): **Single-Molecule Tracking Reveals Diffusion Heterogeneity in Zeolite Channels**
- Prof. Peng Chen (Cornell University, US): **Mapping cooperative ligand adsorption at the nanoscale**
- Prof. Lidya Kisley (Case Western Reserve University, US): **Detecting corrosion reactions at the single-molecule level**
- Prof. Justin Sambur (Colorado State University, US): **Single molecule, single particle-level imaging of defect mediated energy transfer**
- Prof. Katherine (Kallie) Willets (Temple University, US): **Dude, where's my signal? Adventures in single molecule electrochemistry.**

## Afternoon 2 - 16:00 US Central Time, 23:00 Central European Summer Time, 05:00 China Standard Time

- Prof. Bryce Sadtler (Washington University in St. Louis, US): **Using single-molecule imaging to probe the role of oxygen vacancies in semiconductor photocatalysis**
- Prof. Matthew Lew (Washington University in St. Louis, US): **Visualizing Enzyme Activity in Lipid Membranes, One Molecule at a Time**
- Prof. Kevin Welsher (Duke University, US): **Untethering Single Microscopy with 3D-SMART**
- Prof. Prashant Jain (University of Illinois Urbana-Champaign, US): **Three surprises from single-molecule-level probing of a photocatalyst**
- Prof. Christy Landes (Rice University, US): **Single Particle Spectroelectrochemistry: Imaging and Controlling Irreversible Chemical Processes**
- Closing Remarks