

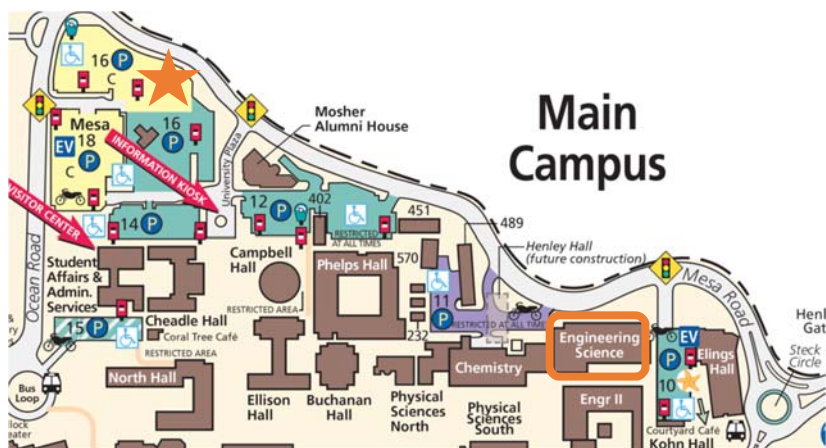
# 2022 SoCal Organometallics Meeting

Saturday, June 18, 2022



University of California, Santa Barbara

Sponsored by Department of Chemistry and Biochemistry and the UCSB College of Letters and Sciences



## Driving Directions:

From the 101 North:

- Take the exit for the Airport / UCSB (Route 217).
- Proceed through the Henley Gate at the east campus entrance.
- Turn right onto Mesa Rd.
- Take the third left and park in lot 16 or 18 (indicated on the map with an orange star).
- You will need to purchase and display a visitor-parking permit.

The meeting will take place in ESB 1001 at the Engineering Science Building.

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<b>11:00 – 11:55</b>	<b>Arrival/Lunch</b> ( <i>provided</i> )
<b>11:55</b>	<b>Introduction (Trevor Hayton)</b>
<b>Session 1</b>	Session Chair: Phoebe Hertler (Hayton group)
<b>12:00</b>	<i>New-to-Nature Metalloreredox Biocatalysis for Stereoselective Radical Transformations</i> Yang Yang, UCSB
<b>12:20</b>	<i>Decaborate as a boron reagent for regioselective arene C-H borylation</i> Sangmin Kim, UCLA (Spokoynny group)
<b>12:40</b>	<i>Investigation of redox carriers for electrochemical carbon capture</i> Alessandra Zito, UCI (Yang group)
<b>1:00</b>	<i>Controlled, One-pot Synthesis of Recyclable Polyolefin-Polyester Block Copolymers, Catalyzed by Yttrium Alkyl Complexes</i> Sophia Kosloski-Oh, USC (Fieser group)
<b>1:20</b>	<i>Synthetic approaches for tuning the thermodynamics of ligand-centered proton-coupled electron transfer reactions</i> Rachel Alvelais, UCI (Heyduk group)

**1:40** *P,O-Chelated Ni Catalysts for Polar Polyolefin Synthesis: Efficient Catalysis and Mechanistic Studies*  
Shuoyan Xiong, Caltech (Agapie group)

**2:00** *Nickel-photoredox catalysis enables difficult reductive eliminations under mild conditions*  
Robert Bradley, UCR (Bahamonde group)

**2:20** *Flash: Complex Biomolecule Nanostructure via Organometallic Au(III) C-S Arylation Reagents*  
Evan Doud, UCLA (Spokoyny group)

**2:30**

**2:40** *Flash: Organometallic Au(III) Reagents for Protein-Polymer Conjugation*  
Hayden Montgomery, UCLA (Spokoyny group)

**2:50** *Flash: Storing energy in "paint"*  
Maxwell Matthejat, UCSB (Ménard group)

**3:00** **Coffee Break**

**Session 2**

**3:20** *Probing the effects of electronics in phosphine oxide carboranes for electrochemical uranyl capture*  
Shannon Heinrich, UCSB (Ménard group)

**3:40** *Functional Os(aryl)<sub>4</sub> Complexes via Grignard Chemistry*  
Clarissa Olivar, USC (Inkpen group)

**4:00** *Site-Selective Functionalization of Sila-Adamantane and Its Ensuing Optical Effects*  
Timothy Siu, UCR (Su group)

**4:20** *Asymmetric synthesis of cyclopentenones via enantioselective protonation enabled by cooperative gold(I) catalysis*  
Kaylaa Gutman, UCSB (Zhang group)

**4:40** *Catalytic Aerobic Oxidation of Polyethylene via C-C Bond Cleavage*  
Yuhao Chen, USC (Williams group)

**5:00** *Formation of a cationic Pd heterogeneous catalyst for olefin (co)polymerization generated by halide abstraction of surface silylium ion (<sup>i</sup>Pr<sub>3</sub>Si<sup>+</sup>) species*  
Jiaxin Gao, UCR (Conley group)

**5:20**

**5:30** *Flash: Electrocatalytic CO<sub>2</sub> Reduction to Formate by a Cobalt Phosphino-Thiolate Complex*  
Jeremy Intrator, USC (Marinescu group)

**5:40** *Flash: Controlling the Catalytic Dechlorination of Polyvinyl Chloride with Rh(I) Phosphine Complexes*  
Mikiyas Assefa, USC (Fieser group)

**5:50** *Flash: Single Molecule Conductance Study of Carbosilanes and Sila-Adamantane*  
Matthew Hight, UCR (Su group)

**6:00** *Flash: The Positional Effects on the Optimization of an Immobilized Re Tricarbonyl Catalyst*  
Jeremiah Choate, USC (Marinescu group)

**6:10**

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**6:20-8:00pm Dinner/Poster Session**

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<b>Poster Presentations</b>	
<b>Presenter</b>	<b>Title</b>
Thomas Czyszczon-Burton, USC (Inkpen group)	Air-Sensitive Single Molecular Conductance Measurements
AJ Chavez, USC (Williams group)	Self-Pressurizing Dehydrogenation of Formic Acid Based Media
Nichols Maciulis, UCSB (Scott group)	Synthesis of polyolefins containing isotopic labeling in strategic positions for polymer degradation studies
Stephanie Sun and Adriane Tam, USC (Williams group)	Synthesis of <i>N</i> -Heterocycles by Hydrogen Borrowing Catalysis
Davin Nguyen, USC (Williams group)	Ultrasound-activated Contrasting Agent
Aren Ohanyan, USC (Fieser group)	Finding the Perfect Fit: Tuning Metal Salt Catalysts to Optimize Polyester Synthesis
Hila Benhaim, UCSB (Ménard group)	Electrode grafted carboranes for redox-switchable uranyl capture and release
Arunavo Chakraborty, UCSB (Ménard group)	Membrane-less split biphasic flow batteries
Yvonne Manjarrez, USC (Fieser group)	Metal-Containing Ionic Liquids for the Synthesis of Aliphatic Polyesters
Luana Zagami, USC (Inkpen group)	Exploring Charge Transfer/ Transport in Tetraaryl Osmium Complexes
Justin Lim, USC (Williams group)	Singlet oxygen to cleave apart epoxy resin systems and composite materials
Nancy Bush, USC (Fieser group)	Developing Catalytic Methods to Promote Selectivity for Hydrodechlorination of Poly(Vinyl Chloride)

Zach Wood, USC (Fieser group)	Exploration of simple rare earth metal salts for the efficient and controlled synthesis of diverse polyesters	Tianyi He, Caltech (Agapie group)	Detailed EPR investigation of an open shell Mo parent amide supported by a para-terphenyl diphosphine ligand
Ana Garcia, UCI (Yang group)	Exploration of heterobimetallic complexes for CO <sub>2</sub> activation	Oswaldo Ordóñez, UCSB (Hayton group)	Use of <sup>13</sup> C NMR Spectroscopy to Probe Covalency in Actinide-Aryl and Lanthanide-Aryl Bonding
Xu Ma, UCSB (Zhang group)	Directing-Group-on-Leaving-Group (DGLG) Strategy for Catalytic S <sub>N</sub> 2-Type Glycosylation	Phoebe Hertler, UCSB (Hayton group)	Slow Magnetic Relaxation in a Ketimide-supported Fe <sub>4</sub> cluster
Xuan Wu, UCSB (Zhang group)	Gold-Catalyzed Oxidation of Enynamides: Synthesis of Enantioselective γ-Substituted Carbonyl Compounds	Dana Cheng, USC (Fieser group)	Using rare earth metal salt catalysts to expand polymer morphology for polyesters
Christina Trang, USC (Inkpen group)	Heterometallic gold-sulfur monolayers assembled from metal bis(terpyridine) complexes	Jeremiah Choate, USC (Marinescu group)	The Positional Effects on the Optimization of an Immobilized Re Tricarbonyl Catalyst
Yin Pok (George) Wong, UCLA (Diaconescu group)	Data-driven Catalyst Exploration for Nonalternating Polyketone Synthesis	Jeremy Intrator, USC (Marinescu group)	Electrocatalytic CO <sub>2</sub> Reduction to Formate by a Cobalt Phosphino-Thiolate Complex
Nicholas Alfonso Vargas, USC (Williams group)	Hydrogen Business Appraisal Tool: Modeling Every Link In the H <sub>2</sub> Supply Chain	Danny Zeng, UCSB (Abu-Omar group)	Chemical Upcycling of Polyethylene to Value-Added α,ω-Divinyl-Functionalized Oligomers
Melissa Sanchez, UCSB (Abu-Omar group)	Renewable Epoxy Thermosets from High-S Lignin	Miguel Baeza Cinco, UCSB (Hayton group)	NO and N <sub>2</sub> O Release from the Trityl Diazeniumdiolate Ligand
Van Do, USC (Williams group)	Trinuclear Iridium Oxo and Iridium Hydrido Complexes: Synthesis and Reactivity in Formic Acid/Methanol Dehydrogenation		
Valeriy Cherepakhin, USC (Williams group)	New Mechanistic Insights into the Iridium-Catalyzed Formic Acid Dehydrogenation		
Matthew Shammami, UCLA (Diaconescu group)	Towards understanding the electronic structure of redox-switchable catalysts		
Linh Le, Caltech (Agapie group)	Effect of Interstitial Atom in Partial Synthetic Models of FeMoco Nitrogenase Active Site		
Hootan Roshandel, UCLA (Diaconescu group)	Ethylene and CO <sub>2</sub> coupling with multimetallic Lewis pairs		
Shijie Deng, UCLA (Diaconescu group)	Aromatic polyamide and copolymer synthesis from NCA polymerization		
Adam Samuel, USC (Marinescu group)	pK <sub>a</sub> dependence for Electrocatalytic CO <sub>2</sub> Reduction using an aminopyridyl cobalt macrocycle		
Angela Shiau, Caltech (Agapie group)	Tetranuclear Mn <sub>4</sub> O <sub>4</sub> complexes as models of the Oxygen Evolving Complex of Photosystem II		
Baoyuan Liu, UCSB (Abu-Omar group)	Utilization of Lignin Monomers Catalyzed by Nb <sub>2</sub> O <sub>5</sub> to Biobased Tri-epoxides		

#### **UCSB COVID-19 Policy:**

*"The [UC SARS-CoV-2 Vaccine Program Policy](#) requires that everyone using campus facilities either have their COVID-19 vaccines up to date (including a booster shot if eligible) or have obtained a recent negative COVID-19 test (within 24 hours for rapid at-home tests or 48 hours for PCR tests). We ask everyone visiting UCSB to comply with this requirement for the safety of everyone on our campus.*

*UC Santa Barbara cannot guarantee that all patrons or employees on site are vaccinated. Unvaccinated individuals may be present. None of these precautions eliminate the risk of exposure to COVID-19."*