The 2015 ANNUAL MEETING of the
Pacific Coast Catalysis Society
EMSL-PNNL, Richland WA

Meeting Schedule

September 17, 2015		
4:00 pm	Registration, Poster setup, vendor table setup.	EMSL lobby
5:15 pm	Poster session and reception (2 hours)	EMSL lobby
September 18, 2015		
7:30	Breakfast /Registration	EMSL 1075
8:00	Opening Remarks	EMSL Auditorium **Johannes Lercher, PNNL**
		Session 1. Chair: Huamin Wang
8:10	NACS Burwell Lecturer	**Charles T. Campbell, UW** Thermodynamics and kinetics of elementary reaction steps on late transition metal catalysts, and using them to search for better catalysts
8:50	Contributed talk	**Oscar Marin-Flores, WSU** Molybdenum Dioxide-Based Catalysts for the Generation of Syngas for Fuel Cell Applications
9:10	Contributed talk	**Zbynek Novotny, PNNL** Cerium oxide nanoclusters on graphene/Ru(0001): Intercalation of oxygen via spillover
9:30	Contributed talk	**Shuozhen Hu, WSU** Pd-based Core@shell Nanoparticles for Direct Formic Acid Fuel Cells
9:50	Coffee break	EMSL 1075
		Session 2. Chair: Zdenek Dohnalek
10:10	Invited talk	**Bruce C. Gates, UC Davis** Molecular Metal Catalysts on Supports: Organometallic Chemistry Meets Surface Science
10:40	Contributed talk	**Alexander Katz, UC Berkeley** Catalyzing Reactions of Large Molecules on Solid Surfaces
11:00	Contributed talk	**Susannah Scott, UC Santa Barbara** Multiple rate-enhancing roles of water in methyltrioxorhenium-catalyzed homogeneous olefin epoxidation by hydrogen peroxide
11:20	Contributed talk	**John Keith, U Pitt** Redox potential and pKa descriptors for exploring molecular cocatalysts
11:40	Invited talk	**Heinz Frei, LBNL** Catalytic Mechanisms by Time-Resolved FT-IR Monitoring under Reaction Conditions
12:10	Lunch	EMSL 1075

		Session 3. Chair: Janos Szanyi
1:00	Invited talk	**Felix Studt, SLAC** CO and CO_2 hydrogenation to methanol
1:30	Contributed talk	**Joseph Singh, Stanford** Atomic Layer Deposition of Platinum Cobalt Alloy Catalysts for Syngas Conversion Reactions
1:50	Contributed talk	**Yizhi Xiang, WSU** Long-Chain Terminal Alcohols and Aldehydes through Catalytic CO Hydrogenation
2:10	Invited talk	**Jean-Sabin McEwen, WSU** Integrating Theory with Experiment for the Effective Design of Catalysts for Energy Applications
2:40	Coffee break	EMSL 1075
		Session 4. Chair: Feng Gao
3:00	Invited talk	**Miroslaw A Derewinski, PNNL** Zeolite-based multimodal porous system as new efficient catalysts for chemical transformations
3:30	Contributed talk	**Yongchun Hong, WSU** Synergistic Catalysis of Fe Based Bimetallic Catalysts for Hydrodeoxygenation of Lignin Derived Compounds
3:50	Contributed talk	**Hui Shi, PNNL** Reductive deconstruction of organosolv lignin catalyzed by zeolite supported Ni nanoparticles
4:10	Contributed talk	**Aleksei Vjunov, PNNL** The catalytic conversion of aqueous cyclohexanol on zeolites
4:30	Contributed talk	**Zizwe A. Chase, WSU** State of Supported Nickel Nanoparticles during Catalysis in Aqueous Media
4:50	Closing Remarks	EMSL Auditorium **Graduate Student Poster Award Presentation**

Poster Session (September 17, 2015)

P1	**Qiuxia Cai, PNNL** Fundamental Understating of Aqueous-phase Acetic Acid Ketonization over Zirconia
P2	**Greg Collinge, WSU** CO-Induced Surface Reconfiguration of Cu/Co(0001) and Cu/Co(1012): Outcomes on CO Dissociation
P3	**Nuoya Yang, Stanford** Investigating the function of metal oxide promoters on supported Rh catalysts by interface modification
P4	**Thomas Allison, NIST** Methanol Oxidation Reaction on PtRu Surfaces
P5	**Zhi-Jian Zhao, Stanford** Understanding the active Cu_2O_x sites for methane selective oxidation to methanol in zeolite: a computational

	study
P6	**Emily Anderst, WSU** NO Adsorption on Fe-SSZ-13: Mechanistic Insight Using DFT Calculations
P7	**Fanglin Che, WSU** Ni-Based Methane Steam Reforming Using External Electric Fields to Enhance Catalytic Performance
P8	**Xiaoxue Hou, WSU** Fuel Flexible Solid Oxide Fuel Cells with High Power Density: Potential for Future Hybrid Electric Vehicles
P9	**Spencer Carey, UW** Energetics of adsorption of methanol and methoxy on Nickel (111) studied by microcalorimetry
P10	**Sebastian Prodinger, PNNL** Improving stability of zeolites in aqueous phase via selective structural defect removal
P11	**Long Chen, PNNL** The Adsorption and Desorption of Small Hydrocarbons on Rutile TiO_2 (110)
P12	**Suh-jane Lee, PNNL** Renewable Materials as Precursors for Acrylic Acid and Acrylate using Ethenolysis
P13	**Mohammad Mahfuzur Rahman, WSU** Effect of water on ethanol conversion over ZnO
P14	**Zizwe Chase, WSU** Interfacial Influence on Cyclohexane Conformation
P15	**Libing Zhang, WSU** Toward Dynamical Understanding of Fundamentals of Catalytic Deconstruction Cellulosic Biomass in Acidic Conditions via a High Resolution Broadband Sum Frequency Generation Vibrational Spectroscopy (HR-BB-SFG-VS)
P16	**Juan Lopez Ruiz, PNNL** Development of Hydrothermally Stable Catalysts for the Thermochemical Conversion of Carbon-Containing Aqueous Streams into Fuels and Chemicals
P17	**Rentao Mu, PNNL** Water Adsorption and Dissociation on RuO_2 (110) Surfaces
P18	**Hongliang Wang, WSU** Aqueous Phase Hydrodeoxygenation of Biomass-Derived Lignin to Jet Fuels
P19	**Hongliang Wang, WSU** Modeling the Transformation of Biomass-Derived Lignin to Biofuels
P20	**Long Qi, UC Santa Barbara** Zeolites in Carbohydrate-Based Biomass Conversion -- Catalysis at the Solid/liquid Interface
P21	**Carlos Alvarez-Vasco, PNNL** Tuning the acid-base properties of mixed oxides by ionic substitution to enhance ethanol condensation to butanol
P22	**Alyssa Hensley, WSU** Elucidating the Mechanism for the Catalytic Hydrodeoxygenation of Phenols
P23	**Jenny M. Voss, WSU** Oxalates as Catalyst Precursors of the Fischer Tropsch Synthesis: the Role of Solvents
P24	**Hafsa Karroum, WSU** Fe-based catalysts for the CO hydrogenation to alkenes: preparation, characterization and catalytic tests
P25	**Xiang Wang, PNNL** Mechanism of CO_2 hydrogenation on Pd/Al_2O_3 catalysts: kinetics and transient DRIFTS-MS studies
P26	**Eric Stuve, UW** Formation of Methanol/Water Ion Clusters at a Platinum Field Emitter Tip

Organizing Committee

Charles H.F. Peden (PNNL), Huamin Wang (PNNL), Feng Gao (PNNL)

Sponsors