



## CeRCaS News Blast 10/27/23

### Ring 1: Project Development for the Fall CeRCaS Meeting (December 13-15<sup>th</sup>, 2023) is Underway!

Here's the time frame of project development and proposal selection:

<u>Action</u>	<u>Date</u>	<u>Remarks</u>
Project development:	started now	huddle with faculty!
White papers due:	Friday, November 10	about 40 proposals anticipated
Pre-LIFE down-select:	November 13-17	about 20 proposals chosen
IAB LIFE assessment:	December 14	detailed project assessments
Project discussion:	December 15	IAB-faculty discussions
Project selection:	December 15	voting in closed door IAB meeting

We anticipate funding to support ten-twelve projects. Of the forty or so project ideas to appear on our "Potential Projects" web page, about twenty will be down-selected for presentation on Thursday of the meeting, from which our new slate of projects will be discussed and selected by the IAB.

### Ring 2: Follow the Action!

Our thirteen projects are running full steam with enthusiastic participation of our members. There will be another round of project updates prior to the Fall Meeting; watch for emailed alerts. Remember that project updates are not just limited to the nominal mentors, but can be attended by all members. If any member wants to dive deeper into any particular project, each recorded project update and the update slide deck can be accessed with the member password and username. Click on the link in the left column of each project.

### Current Project Updates:

Update Links	Project	Principal Investigators	Industrial Mentor(s)
<b><u>Project 46</u></b>	Single Atom Catalysts via Switched Solvent Synthesis (SwiSS)	Williams(USC) Regalbuto(USC)	UOP ADM
	From Isolated Atoms to 2d-Raft Clusters via Switched Solvent Synthesis	Blom(USC) Gupton(VCU) Ciston(UCD-B)	Clariant Evonik
<b><u>Project 47</u></b>	Synthesis of Well Defined Ru-	Lauterbach(USC)	Heraeus

	Nanoparticles on an Oxide Support	Regalbuto(USC)	Clariant
<b>Project 48</b>	Bimetallic Catalysts on Commercial Extruded Supports Prepared by Electroless Deposition	Tengco(USC) Monnier(USC)	Evonik Heraeus BASF INL Clariant
<b>Project 49</b>	Imaging Atomically Dispersed and Aggregated Metals Supported On and Encapsulated In Zeolites  Reversible Formation of Encapsulated Nanoparticles from Atomically Dispersed Pt in Zeolites	Katz(UCD-B) Kronnawitter(UCD-B) Ciston(UCD-B) Gates(UCD-B) Kulkarni(UCD-B) Runnenbaum(UCD-B) Bare (UCD-B) Monnier(USC)	Shell XOM UOP BASF
<b>Project 50</b>	Facile Synthesis of Pd/GO Catalysts Immobilized on an Oxide Support	Gupton(VCU) Carpenter(VCU)	Biogen TC GreenChem
<b>Project 51</b>	Chemistry and Catalysis of Atomically Dispersed Pt and Pd in Zeolites	Kronnawitter(UCD-B) Runnenbaum(UCD-B) Kulkarni(UCD-B) Bare (UCD-B) Katz(UCD-B) Gates(UCD-B)	Shell UOP
<b>Project 52</b>	Understanding the CO <sub>2</sub> Binding Site Created in Humid Environments in K-MER	Katz(UCD-B) Kulkarni(UCD-B) Monnier	XOM Phillips66 Mitsubishi
<b>Project 53</b>	Enabling Rigorous Quantification of Humid CO <sub>2</sub> Adsorption/Desorption in Zeolites	Katz(UCD-B) Kulkarni(UCD-B)	XOM Phillips66 Mitsubishi
<b>Project 54</b>	Controlling Selectivity in Enantioselective Catalysts Using Partial Confinement in Zeolitic External Surface Pockets	Gupton(VCU) Raine(VCU) Katz(UCD-B)	Biogen TCG
<b>Project 55</b>	Improved Catalysts for Direct Reduction of CO <sub>2</sub> to Methanol Using Bimetallic Catalysts Using Electroless Deposition Methods	Monnier(USC) Tengco(USC)	INL Aramco BASF Heraeus UOP
<b>Project 56</b>	Effect of Extraframework Al and/or P Species on Alkane Cracking Catalysis	Katz(UCD-B) Kronnawitter(UCD-B) Runnenbaum(UDC-B) Kulkarni(UCD-B) Gates(UCD-B)	Aramco INL Shell BASF UOP
<b>Project 57</b>	Non-Precious Metal Phosphides and Nitrides as HER and OER Catalysts	Y-Lin(WSU) H-Lin(WSU) McEwen(WSU)	Phillips66 UOP
<b>Project 58</b>	Supported Mixed Metal Oxide Catalysts for Oxidative Dehydrogenation of Ethane to Ethylene	Tengco(USC) Monnier(USC)	Clariant Phillips66 INL Heraeus

### Ring 3: C'mon Over to Richmond!

The main purpose of the Fall Meeting is the selection of the new slate of projects. Progress on current projects will also be reported. The meeting will be held at the Omni Richmond in downtown Richmond, VA. The group rate is \$153/night; please book by 11/21. To do so, use this link:



The meeting will begin at 2:00 p.m. on Wednesday and conclude at noon, Friday. A detailed meeting agenda will be distributed closer to the meeting date. Who's coming to join JR and Frank for an early round of golf on Wednesday?

For more information:

<http://www.che.sc.edu/centers/cercas/>