COLUMBIA ELECTROCHEMICAL ENERGY CENTER

Design, Study, and Implement Sustainable Energy Storage and Conversion

Fall Symposium Agenda

September 13, 2023
Joseph D. Jamail Lecture Hall, Columbia Journalism School, Pulitzer Hall

The CEEC Fall Symposium will engage attendees on scaling and accelerating the deployment of electrochemical energy storage and conversion technologies. Symposium panels will draw on learnings from CEEC labs, industry partners, and startups spun out of CEEC labs. A poster session curated by CEEC's 50 PhD students and postdocs will provide industry participants with an atoms to markets view of electrochemical energy applications including fast-charging EV LiB's, grid scale storage, electrolysis for hydrogen generation, critical materials extraction and refinement for a sustainable energy future.

8:30 – 9:00	**Check-in / Continental Breakfast** (Lecture Hall)
9:00 – 9:10	**Welcome:** Garud Iyengar – *Tang Family Professor & Senior Vice Dean for Research and Academic Programs, Columbia Engineering* **Overview of Day:** Dan Steingart – *Director, CEEC; Professor, Earth and Environmental Engineering, Columbia University*
9:10 – 9:15	**Session I. Sustainable fuels** Matthias Preindl, Session Chair – Associate Professor, Electrical Engineering
9:15 – 10:00	**CEEC Faculty Talks – Electrolyzers and catalysts for sustainable fuel generation** Dan Esposito – *Associate Professor, Chemical Engineering, Columbia University* Juliana Carneiro – *Assistant Professor, Chemical Engineering, Columbia University*
10:00 – 10:20	**Break**
10:20 – 11:30	**Panel I – Current state of industry R&D** Dan Esposito, Moderator – *Associate Professor, Chemical Engineering, Columbia University* • Carl Cottuli – *Senior Vice President, Development Engineering, Bloom Energy* • Lauren Greenlee – *Chief Technology Officer, sHYp* • Karen Swider-Lyons – *Principal Research Scientist, Hydrogen Fuel Cells, Plug Power* • Kevin Tran – *Senior Research Scientist, Materials Informatics, Toyota Research Institute*
11:30 – 1:00	**Lunch and Poster Session I**

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AGENDA *(continued)*

1:00 – 1:05	**Session II. Novel chemistries for electrochemical energy technologies** Alex Urban, Session Chair – *Assistant Professor, Chemical Engineering, Columbia University*
1:05 – 1:50	**CEEC Faculty Talks – Electrochemical metal extraction and novel electrode chemistries** Alan West – *Director, CEEC; Professor, Chemical Engineering, Columbia University* Yuan Yang – *Associate Professor, Applied Physics and Materials, Columbia University*
1:50 – 2:50	**Panel II – Opportunities to scale alternative chemistries** Lauren Marbella, Moderator – *Associate Professor, Chemical Engineering, Columbia University* • Zac Combs – *R&D Director, Energy Systems, Birla Carbon* • Martin Fransson – *Partner, Mercator Partners* • Scott Marquis – *Battery Aging & Modeling Engineer, NorthVolt* *(Group photo while seated)*
2:50 – 3:10	**Break**
3:10 – 3:15	**Session III. Scaling electrochemical energy technologies** Bolun Xu, Session Chair – *Assistant Professor, Earth and Environmental Engineering, Columbia University*
3:15 – 4:00	**CEEC Faculty Talks – Motivating new models for deployment** Dan Steingart – *Director, CEEC; Professor, Earth and Environmental Engineering, Columbia University* Vijay Modi – *Professor, Mechanical Engineering, Columbia University*
4:00 – 5:00	**Panel III – Technical indicators of a readiness to scale** Cheryl Martin, Moderator – *Founder & Principal, Harwich Partners* • Michael Dorenfeld – *Managing Director, HPS Partners* • Gunduz Shirin – *Vice President, Goldman Sachs* • Gleb Yushin – *Co-Founder & CTO, Sila*
5:00 – 5:10	**Wrap Up and Summary of Outcomes** Alan West – *Director, CEEC; Professor, Chemical Engineering, Columbia University*
5:10 – 6:30	**Reception and Poster Session II**
6:30	**Departures**

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