

AGENDA

NSF IUCRC Center for Solid-State Electric Power Storage (CEPS)

3rd Industry Advisory Board Meeting

November 15-16, 2022 (Mountain Standard Time)

Surbeck Center, South Dakota School of Mines and Technology, Rapid City, SD, 57701

Points of Contact/Technical Issues/Emergency: Fan: **605-939-5821**, Pascal: **605-430-4334**



Day 1: November 15 th , 2022 (Ballroom, Surbeck Center, SD Mines campus)	
7:00 am MST	Participant Registration
7:30 am – 8:00 am	Breakfast and Networking
8:00 am – 8:30 am	<p>Session 1: Welcome Remarks</p> <p>Chair: CEPS SD Mines Site Co-director Dr. Brett Carlson (SD Mines)</p> <ul style="list-style-type: none"> • Vice President for Research at SD Mines Dr. Ralph Davis • Associate Vice President for Research-Economic Development at SD Mines Joseph Wright • Vice President for Research at Syracuse University Dr. Duncan Brown • Associate Dean for Research, College of Science, Northeastern University Dr. Erin Cram
8:30 am -9:00 am	<ul style="list-style-type: none"> • Materials and Engineering and Science Program at SD Mines (Director Dr. Jasthi) • Pitch from the Michigan State University (prospective new CEPS site) • 2-year college engagement (Western Dakota Technical College, President Dr. Ann Bolman) • Black Hills Angel Fund (CEO Jim Quinn) • High school engagement (Ms. Betsy Burtzlaff, Newell High School; Lance Schroeder and Sarah Kuegle, Stevens High School) • Pitch presentation from Medtronic (Dr. Mark Viste IAB Chair)
9:00 am – 9:30 am	NSF IUCRC Presentation - IUCRC Program Director Dr. Crystal Leach
9:30 am – 10:00 am	Vision, Capabilities, and Uniqueness of the IUCRC Center (CEPS Director Dr. Alla Smirnova)
10:00 am–10:15 am	Networking Refreshment Break
10:15 am-10:30 am	<i>How to submit a L.I.F.E. form for each project: Pascal Britton/Dr. Fan Zheng (SD Mines)</i>
10:30 am–12:00 pm	<p>Session 2: Reports and Continuation Proposals Materials, Characterization, and Prototyping of Solid-state Lithium-Ion Batteries</p> <p>Session Chair: CEPS Managing Director Dr. Serge Pann (Northeastern University)</p> <p><i>After each presentation, please submit your Level of Interest and Feedback Evaluation (L.I.F.E.) form.</i></p>

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	<p>Project 1: Innovative Composite Materials for Scalable Supersonic Cold Spray Technology, <u>Dr. A. Smirnova</u> and Dr. Salem, SD Mines; Dr. S. Mukherjee and Dr. S. Pann, Northeastern University</p> <p>Project 2: Interface Engineering and Battery Prototyping for EV and Off-grid applications, <u>Dr. Q. Qiao</u>, Syracuse; Dr. F. Zheng, SD Mines; Dr. J. Gallaway, Northeastern University</p> <p>Project 3: <i>In-Situ / Operando</i> Analysis of Interfaces and Structural Studies in Solid-state Battery Materials and Cells, <u>Dr. S. Mukerjee</u>, Dr. J. Gallaway, Dr. S. Pann, Northeastern University; Dr. A. Smirnova, SD Mines</p>
12:00 pm – 1:00 pm	<p>Working Lunch and Presentations</p> <ul style="list-style-type: none"> • Craig Wilkins, CFO, AESIR Technologies • Dr. Doerner Kinchel, Director, South Dakota EPSCoR program
1:00 pm – 2:20 pm	<p>Session 3: New Project Proposals: Polymer-based Solid-state Batteries, DFT Modeling, and Solid-state Battery Recycling</p> <p>Session Chair: CEPS Site Director at Syracuse University Dr. Quinn Qiao <i>After each presentation, please submit your Level of Interest and Feedback Evaluation (L.I.F.E.) form.</i></p> <p>Project 4: Polymer-Based Nanocomposites for Lithium-Ion Solid-State Batteries <u>Dr. D. Salem</u>, SD Mines; Dr. S. Mukerjee, Dr. H. Zhu, Northeastern</p> <p>Project 5: DFT Prediction Modeling of the Next-generation Lithium-ion Solid-state Batteries, <u>Dr. T. Paudel</u>, SD Mines; Dr. F. Hung, Dr. J. Zhu, Northeastern</p> <p>Project 6: The Electrochemical Recycling of Lithium-Ion Batteries, <u>Dr. B. Carlson</u>, SD Mines; Dr. F. Zheng, SD Mines; Dr. S. Mukerjee, Dr. S. Pann, Northeastern University</p>
2:20 pm – 2:30 pm	Networking Refreshment Break
2:30 pm – 3:00 pm	<p>Industry Workshop</p> <p>Moderators: Mark Viste (Medtronic), Marius Ellingsen (VRC Metal Systems), and Chris Brooks (Honda)</p>
3:00 pm – 5:00 pm	<p>Poster Session from 3 University Sites</p> <ul style="list-style-type: none"> • SD Mines • Syracuse • Northeastern
4:00 pm-5:00 pm	Networking Dinner (Ballroom, Surbeck Center)

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Day 2: November 16th, 2022 (Ballroom, Surbeck Center, SD Mines)	
8:00 am – 8:30 am	Breakfast and Networking
8:30 am – 9:30 am	L.I.F.E. Form Review and Discussion Panel Discussions based on the answers to the question provided in the L.I.F.E. forms by the faculty responsible for the project NSF Evaluator Dr. Victoria Hill , NSF Director Dr. Crystal Leach , and participants from industry/university sites
9:30 am – 10:00 am	Networking refreshment break
10:00 am – 10:30 am	Center Response to Feedback from Industry Workshop, L.I.F.E. Participants: Center site Directors and presenters of the projects
10:30 am – 11:30 am	NSF Closed Session with Industry Members (NSF evaluator Victoria Hill and Crystal Leach) Bump Lounge , next to the Ballroom, Surbeck Center NSF and Industry/National lab representatives; The finalized decision on the NSF IUCRC CEPS; Responsibility Assignment Matrix (RAM)
11:30 am – 12:00 pm	Next Steps, Action Items & Closing Remarks All participants join this discussion (Ballroom)
12:00 pm – 1:00 pm	Working lunch and Presentation by Dr. Steven Visco, CEO and CTO, PolyPlus Battery Company
1:00 pm – 2:30 pm	Bus tour to the VRC Metal Systems (Cold Spray Manufacturing Facility)
2:30 pm – 5:00 pm	Bus tour to the Mount Rushmore
5:00 pm – 8:00 pm	Networking dinner for the NSF representatives, industry members, collaborators, and CEPS Management Team Downtown Rapid City Enigma Restaurant, Rushmore Hotel; 445 Mt Rushmore Rd, Rapid City, SD 57701 (605) 348-8300