

2025 Spring Meeting of the
Condensed Matter and Materials Research Committee (CMMRC)

March 11-12, 2025

Hybrid Meeting

In Person at the Academies Beckman Center, Irvine, CA

Online via Zoom and Livestream

TUESDAY, MARCH 11, 2024

OPEN SESSION - LIVESTREAM: <https://vimeo.com/event/4963415>

2:00 PM	Welcome and Meeting Objectives	Leslie Momoda, <i>Chair, CMMRC</i>
2:05 PM	Session 1: Artificial Intelligence for Materials Synthesis and Inverse Design <i>(25 minute presentation and 15 minutes for Q&A, each)</i> Data-driven Understanding and Prediction of Solid State Synthesis Reactions	Kristin Persson <i>University of California, Berkeley</i>
	Reinforcement Learning for Materials Discovery from Sequence Control to Metastable Materials Synthesis	Subramanian Sankaranarayanan <i>Argonne National Laboratory</i>
3:25 PM	<i>Break (15 minutes)</i>	
3:40 PM	Session 2: Mixed Ion Conductors with Iontronics and Hybrid Materials <i>(25 minute presentation and 15 minutes for Q&A, each)</i> Mixed Ionic and Electronic Conductors: Unconventional Materials Fundamentals and Iontronics	Alberto Salleo <i>Stanford University</i>
4:20 PM	Discussion/Q&A with Speakers and Attendees	
5:00 PM	<i>Adjourn for day; dinner on your own</i>	

WEDNESDAY, MARCH 12, 2024

OPEN SESSION - LIVESTREAM: <https://vimeo.com/event/4963421>

9:00 AM	Review of Day 2 Agenda	Leslie Momoda
9:05 AM	Update since 2020 Neuromorphic/Memristor Workshop (25 minute presentation and 15 minutes for Q&A)	A. Alec Talin <i>Sandia National Laboratory</i>
9:45 AM	Session 3: Self-Powered Nanomaterials <i>(25 minute presentation and 15 minutes for Q&A, each)</i> Active Autonomous Nanosystems	Ayusman Sen <i>Pennsylvania State University</i>
	Morphogenesis of soft matter	Zvonimir Dogic <i>UC Santa Barbara</i>
11:05 AM	<i>Break (15 minutes)</i>	

(more schedule information on page 2)

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11:20 AM	Session 4: Surface Science to Block Gaseous Non-Sieverts Permeation <i>(25 minute presentation and 15 minutes for Q&A, each)</i> Surface Science to Master the Quest for Tunable Gaseous Non-Sieverts Permeation	John Scully <i>(virtual)</i> <i>University of Virginia</i>
	High Temperature H-Isotope Permeation in Metals	Thomas Fuerst <i>Idaho National Laboratory</i>
12:40 PM	<i>Lunch (60 minutes)</i>	
1:40 PM	Breakouts to Discuss Speaker and Emerging CMMR Topics <i>(40 minutes)</i>	
2:20 PM	Reconvene for Discussion, Outcome of Breakout Discussions <i>(40 minutes)</i>	
3:00 PM	Perspectives from National Labs and Industry <i>(40 minutes)</i>	
3:40 PM	<i>Break, adjourn open session</i>	

IMPORTANT NOTES

Presenters:

- Please do not include ITAR-controlled or sensitive information in your presentation.
- A National Academies Board staff member will ask you to sign a form before the meeting allowing us permission to use your likeness and presentation for our livestream video, which will be posted on our Board website after the meeting. Please get in touch with us before the meeting if you have any concerns about this usage.

Committee & Board Members and Presenters:

- Remote access will be provided through Zoom. This will allow you to participate in the meeting even if you can't be physically present.
- Please note that Zoom allows audio and any materials exchanged or viewed during the session to be recorded and shared.
- By participating in this activity, you agree to let your voice, likeness, and any materials you provide be recorded for use and dissemination. This includes any language, format, or media now known or later devised.
- You release the National Academies of Sciences, Engineering, and Medicine from any and all claims, liability, or damages arising from any such use. If you disagree, please do not join the session.

THANK YOU ALL FOR YOUR COOPERATION, AND WE LOOK FORWARD TO A SUCCESSFUL MEETING.