



NSF SEES
SYNCHROTRON EARTH AND ENVIRONMENTAL SCIENCE



Sunday, September 22

8am-12pm – T113. Synchrotron X-ray and Neutron Applications in Earth and Environmental Science

- [8:05-8:20am] Presentation by Andrew Campbell – “SEES: New Opportunities And Developments In Synchrotron Earth And Environmental Science”
- [8:20-8:35am] Presentation by Martin Kunz – “In Situ X-Ray And IR Probes Relevant To Earth And Environmental Sciences At The Advanced Light Source At Lawrence Berkeley Laboratory”
- [8:35-8:50am] Presentation by Joanne Stubbs – “Mineral Surface And Interfacial Science At GSECARS”
- [8:50-9:10am] Presentation by Brandy Toner – “Mineral-Organic Matter Interactions In Aquatic Systems: The Need For Integrated, Multi-Modal Imaging And Spectroscopy”
- [9:10-9:25am] Presentation by Colleen Hoffman – “Identifying Critical Mineral Binding Mechanisms And Distribution In Acid Mine Drainage Treatment Solids To Inform Targeted Recovery Methods”
- [9:25-9:40am] Presentation by Jennifer Jackson – “A Spatio-Temporal Approach To Melting Investigations: Dissecting Earth’s Core-Mantle Boundary”
- [9:40-9:55am] Presentation by Barbara Ratschbacher – “Fe³⁺/Fe^T Ratios In Amphibole Minerals Characterized By Single-Crystal Synchrotron Mössbauer Spectroscopy: A Tool To Understand The Redox State Of Arc Magmas”
- [9:55-10:10am] Discussion and Q&A for synchrotron facility access

213B (Anaheim Convention Center)

Tuesday, September 24

8am-5:30pm – Poster #156 by Jin Zhang – “Fast Seismic Anomalies Under Continents Explained By The Delaminated Lower Continental Crust – Implications From High Pressure-Temperature Elasticity Of Jadeite”

Hall D (Anaheim Convention Center)

Wednesday, September 25

8am-5:30pm – Poster #125 by Brianna Wenzel – “The Redox State Of Fe And S At Kama’ehuakanaloa Seamount And Primitive Mantle f_{O_2} ”

Hall D (Anaheim Convention Center)

8am-12pm – T109. Advances in Mineral Sciences from Atomistic to Macro Perspectives I: Recognition of Dr. Nancy L. Ross, 2024 Roebling Medalist of the Mineralogical Society of America

- [9:40-9:55am] Presentation by Sean Shieh – “High Pressure And High Temperature Study On Plagioclase: A Path From Plagioclase To Diaplectic Glass And Maskelynite”
- [10:55-11:10am] Presentation by Yanbin Wang – “Twin Domain Switching In Neighborite (NaMgF₃) During Oscillating Deformation: Potential Implications For Intrinsic Seismic Attenuation Of The Lower Mantle”

206B (Anaheim Convention Center)

1:30-5pm – T109. Advances in Mineral Sciences from Atomistic to Macro Perspectives II: Recognition of Dr. Nancy L. Ross, 2024 Roebling Medalist of the Mineralogical Society of America

- [3:20-3:35pm] Presentation by Sang-Heon Shim – “Formation Of Hydride Perovskite And Water On Hot Hydrogen-Rich Exoplanets”
- [3:35-3:50pm] Presentation by Jennifer Jackson – “Spin Transition Links Water And Ferric Iron In Earth’s Lower Mantle”
- [4:30-4:35pm] Presentation by Matthew Whitaker – “Using In Situ X-Ray Diffraction And Imaging To Study Materials Under Pressure”

206B (Anaheim Convention Center)

Presentations featuring NSF SEES @ GSA 2024