



Innovative Programming Session

ACS Fall 2026
August 23-27, Chicago, IL

Session Title: Sustainable Recovery of Critical Minerals and Materials

Organized by: Young-Shin Jun, COMSCI, Tom Lograsso, Critical Materials Innovation Hub, Mallikarjuna Nadagouda, ENVR, Sushil Kanel, ENVR, Vitalii Starchenko, GEOC, and Gang Wu, ENFL

Co-Sponsored by: COMSCI, ENFL, ENVR, and GEOC

This symposium will focus on the frontiers of sustainable recovery of critical minerals and materials (CMM). Addressing the supply chain of critical materials is essential to meeting economic, environmental, and national security needs, and requires strong collaboration among the chemical research, industrial, and governmental communities. Building on recent advances in the chemical sciences, this symposium will serve as a global forum for these communities to exchange knowledge, share strategies, and identify critical research and technology gaps.

Presentations including, but not limited to, the following areas are solicited:

1. Understanding of CMM properties for their sustainable recovery
2. AI/ML-enabled approaches for discovery, extraction, and processing of CMM
3. Utilization of unconventional resources, including byproducts and secondary sources
4. Innovative extraction and separation processes
5. Supply chain analysis, techno-economics, and policy considerations for CMM
6. Development, scale-up, and deployment of practical technologies for CMM recovery and reuse