



## INDUSTRY AFFILIATE: CRITICAL MINERALS

The transition to a low carbon future will require an enormous amount of minerals and metals. This increase in demand will have profound impacts on the dynamics of trade, markets and create new geopolitical challenges. Issues related to governance, innovation, resilience, security, permitting and reporting have global implications. Using Colorado School of Mines extensive expertise, Mines' s Critical Minerals Initiative contributes critical insight to inform stakeholders.

### CRITICAL MINERALS RESEARCH AT MINES

#### Carbon Emissions

- ▶ Emissions monitoring
- ▶ Accounting frameworks
- ▶ Sustainable finance
- ▶ Net-zero strategies

#### Minerals & Metals

- ▶ Material characterization
- ▶ Supply/Demand analysis
- ▶ Circular economy
- ▶ Mining life cycle
- ▶ Tailings
- ▶ Urban mining

#### Supply Chain

- ▶ Resiliency quantification
- ▶ Transparency assessment
- ▶ Transportation route mapping
- ▶ Systems dynamics modeling
- ▶ Sociotechnical system modeling
- ▶ Artisanal mining
- ▶ Data analytics and AI

#### Policy & Economics

- ▶ Economic analysis of material supply chains
- ▶ Geopolitics & Security
- ▶ Environment, Social, Governance (ESG)

<https://www.mines.edu/global-energy-future/minerals-and-metals/>

# CRITICAL MINERALS INDUSTRY AFFILIATE MEMBERSHIP

## CRITICAL MINERALS ACTIVITIES AT MINES

### Research

- ▶ Access to cutting-edge research conducted by Mines faculty, post docs and students

### Events

- ▶ Invitations to Payne Institute for Public Policy events on Critical Minerals issues

### Knowledge

- ▶ Knowledge sharing through virtual and in-person roundtables and workshops

### Students

- ▶ Students to connect with and recruit for staffing

### Innovation

- ▶ Analysis of ground-breaking research and innovation

### Connection

- ▶ A professional network of industry leaders on Critical Minerals

### Tier 1: \$50,000 annual

### Tier 2: \$25,000 annual

*Open to NGOs, non-profits, foundations, and startups.*

Membership fees support graduate students, laboratories and administrative costs.

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## MINES

**#3 Elite Energy Universities (American Energy Society)**

**#3 Best Engineering Colleges in US (Money Magazine)**

**R1 Carnegie top tier research university**



**COLORADO SCHOOL OF MINES**