Critical mineral processing is a multi-scale problem[1]

Membranes offer process intensification opportunities within critical mineral processing[1]

Example: Superstructure optimization of diafiltration cascades to recycle spent lithium-ion batteries[2]

PrOMMiS enables faster process development, optimization, and scale-up

How do we...
- incorporate new feed streams into the existing infrastructure to promote a circular economy?
- optimize bespoke processes within supply chains?
- address uncertainty across scales?
- account for variability in sources and process performance?
- embed the optimized membranes within a larger process?

University of Kentucky Pilot Process for Coal Recovery[3]

Membrane replacement

Fractionation opportunity

BULK REE CONCENTRATE

SPENT WASTE

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References

