The goal for Team Goldielocks Phase 2 project is to transfer optimized process conditions developed in Phase 1 from a batch process to a continuous pilot scale process using surfaceengineered off-the-shelf membrane substrates. Additionally, a more realistic brine will be used in Phase 2 to produce an energy-efficient, cost-effective, and easy-to-scale module to directly extract lithium and other critical minerals from Salton Sea geothermal brine. Clean water will be generated and re-injected to maintain reservoir pressure and health and minimize waste. Phase 2 work will be carried out by the same team members involved in Phase 1, in addition to a new industry partner for the last step to produce battery grade LiOH.