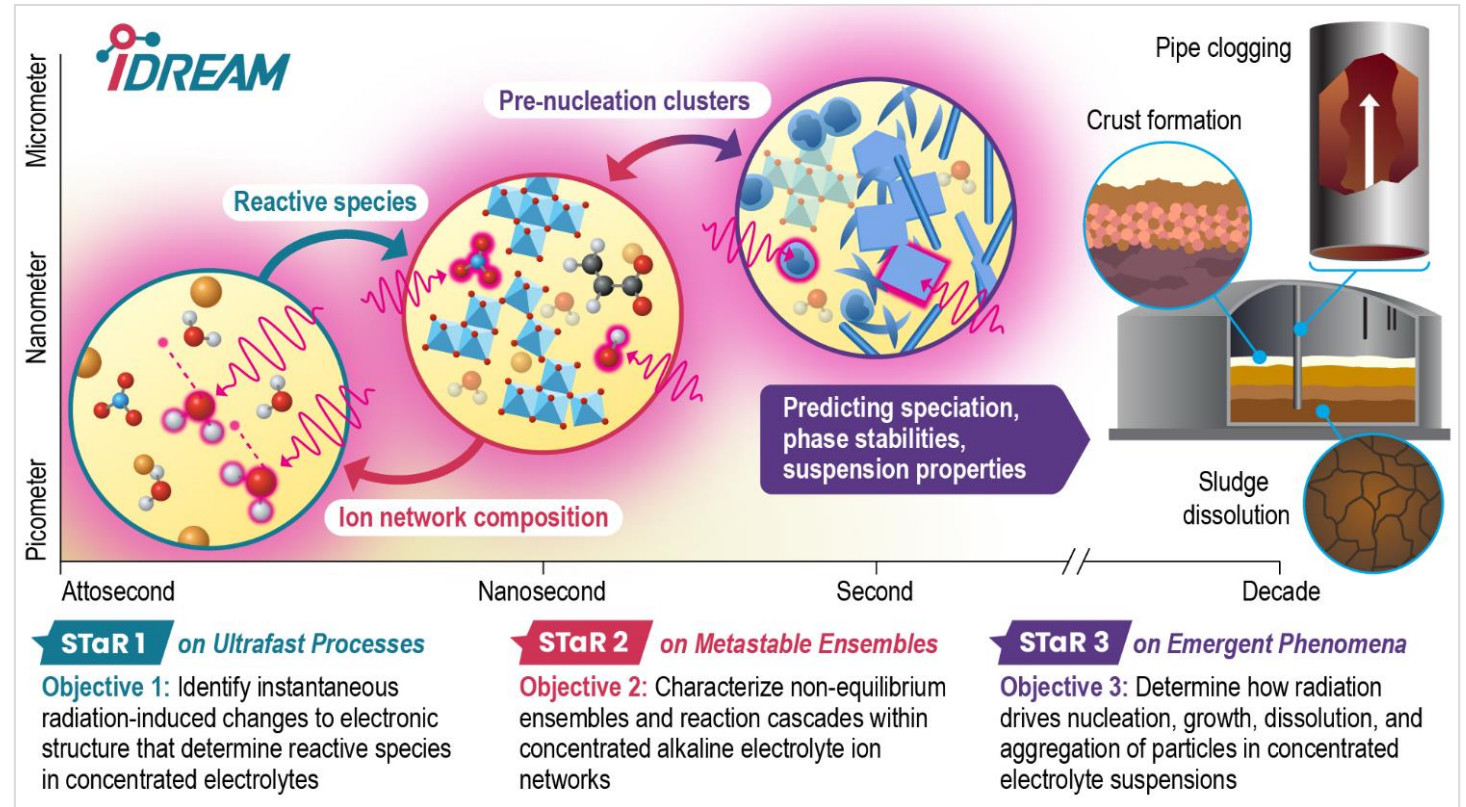


Ion Dynamics in Radioactive Environments and Materials (IDREAM)

Carolyn Pearce (Pacific Northwest National Laboratory); Class: 2016-2028

MISSION: To master the cascade of radiation chemistry that drives far from equilibrium speciation and reactivity in chemically complex environments, linking attosecond timescales to decadal processes.

RESEARCH PLAN: Provide the technical basis to improve retrieval and processing of millions of gallons of radioactive tank waste at DOE legacy sites and to inform treatment of waste from new nuclear reactors. Combine experimental and computational expertise to revolutionize the manipulation of chemical processes in extreme far from equilibrium environments that are characterized by high ionic strength and radiation-induced metastability across different spatiotemporal regimes (STaRs).



www.pnnl.gov/idream

