Focus Area 4

Crosscutting Research

Lead: Eric Schwegler, LLNL
Deputy: Joni Barnes, INL

Enabling Science

E. Schwegler, LLNL

- *Ab initio* Theory of Temperature Dependent and Multi-Scale Phenomena in Magnets, *V. Antropov, Ames* (4.1.1)
- Predicting, Controlling and Tailoring Crystal Electric Field Splitting for Magnetic Anisotropy in REE Systems and *d*-Impurities in Phosphors, *tbd, tbd* (4.1.2)
- Fundamental Properties and Phase Diagrams, *R. Riman, Rutgers* (4.1.3)
- Rapid Assessment Methodologies, facility; facility; story; *R. Ott, Ames* (4.1.4)

Environmental Sustainability

J. Barnes, INL

- Treatment of Mineral Processing Waste Streams and Recovery of Clean Water Using Sorption, Passive, and Active Microfiltration Systems, facility; *J. Klaehn, INL* (4.2.1)
- Rare Earth Effects on Biological Wastewater Treatment Systems, *Y. Fujita, INL* (4.2.2)

Supply Chain & Economic Analysis

R. Eggert, CSM

- Criticality and Sustainability Assessment, *R. Eggert, CSM* (4.3.1)
- Economic Analysis of CMI Research and Global Material Supply Chains, *K. Cafferty, INL* (4.3.2)
- National Technology Roadmap for Critical Materials, *J. Collins, INL* (4.3.3)

Ames: The Ames Laboratory
CSM: Colorado School of Mines
INL: Idaho National Laboratory
LLNL: Lawrence Livermore National Laboratory
Rutgers: The State University of New Jersey