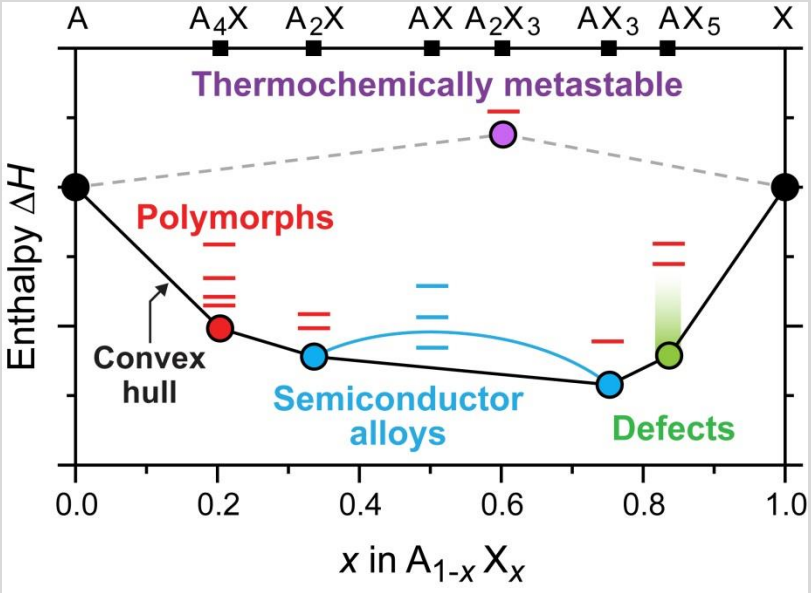
Center for Next Generation of Materials by Design (CNGMD)
William Tumas (National Renewable Energy Laboratory)

The mission of CNGMD is to dramatically transform the discovery of functional energy materials **using high-throughput multiple-property search, incorporation of metastable materials into predictive design, and the development of theory to guide materials synthesis.**

www.cngmd-efrc.org



Four classes of metastable materials (shown in color) targeted for theory-driven synthesis in the CNGMD EFRC.

RESEARCH PLAN

- **Integrate high-throughput theory, synthesis, characterization, and data mining to rapidly *discover new functional semiconductor materials for energy applications.***
- **Develop new theory and experimental *tools* to accelerate materials discovery.**
- **Discover and study *metastable materials* including polymorphs, alloys, defects.**
- **Identify *synthesis pathways* by coupling theory and *in-situ* characterization.**

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