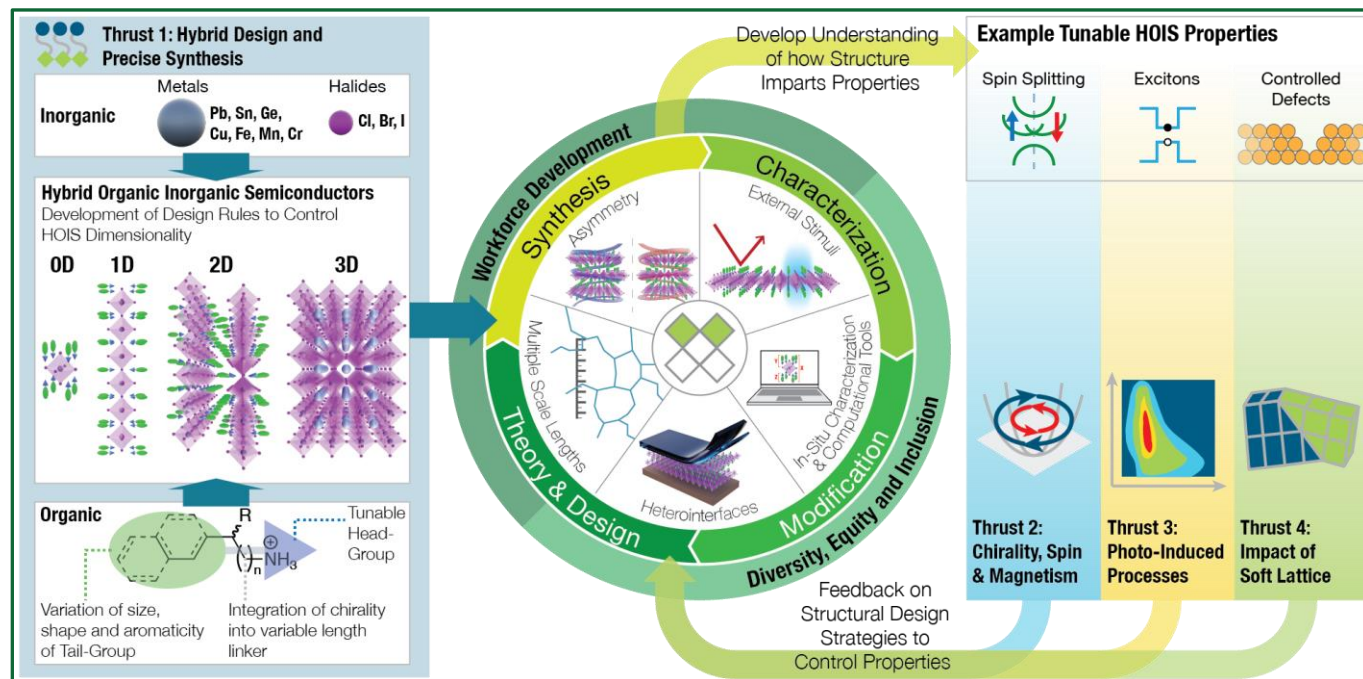


# Center for Hybrid Organic Inorganic Semiconductors for Energy (CHOISE)

Matthew C. Beard (National Renewable Energy Laboratory); Class: 2018-2026

**MISSION:** To demonstrate *unprecedented* control over **spin**, **charge**, phonon and **light** properties through **synthesis** and characterization of crystalline Hybrid Organic Inorganic Systems, their interfaces and heterostructures.



[www.choise-efrc.org](http://www.choise-efrc.org)

## RESEARCH PLAN

We will employ the full flexibility of organic and inorganic chemistry to design and demonstrate HOIS with unique and controllable spin, electronic, and optical properties. Key structural parameters will include metal selection, halide/pseudohalide choice, overall stoichiometry, and organic cation choice.