Research Experiences for Undergraduates in Renewable Energy

Charles A. Stone, IV  Colorado School of Mines  DMR Award 1063150

Intellectual Merit: An interdisciplinary team of approximately 30 CSM faculty, as well as staff from the Colorado Energy Research Initiative and the National Renewable Energy Laboratory, mentored students in projects addressing the performance of next-generation photovoltaic devices; microstructural design of composite membranes; hydrogen storage in clathrate hydrates; social and ethical implications of climate change, renewable energy, sustainability & education; hybrid energy systems for oil shale production; and optimizing computational tools for energy science.

Students attended weekly technical seminars that spanned photovoltaics, energy storage materials, the role of catalysts in fuel cells, computational energy science, and challenges & opportunities with biofuels.

Professional development sessions covered Ethics and the Responsible Conduct of Research; Learning, Teaching, & Working Across Generations; Being a Role Model, Finding a Mentor; Careers in Renewable Energy; and Graduate Schools & Fellowship Opportunities.

Student “Snapshots” Sessions allowed students to informally share their research results in an open learning environment.


2012 Renewable Energy REU students at Colorado School of Mines