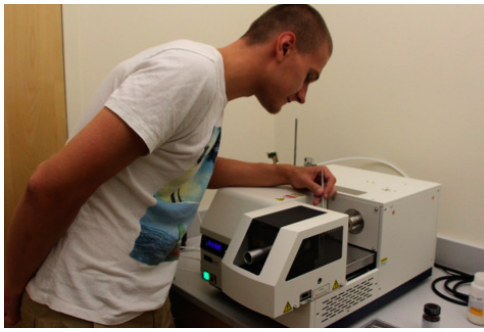
SEED GRANT AWARDS

The intent of the Infrastructure Seed Grant (ISG) program is to increase the access of undergraduate students, especially women and members of underrepresented groups, to research experiences by increasing non-PhD granting institutions' capacity to provide these experiences for students. The ISG may be used to purchase research and teaching equipment related to specific NM EPSCoR research areas and to pay for student researcher salaries, research supplies and student conference travel. Two ISG awards were implemented in Year 2.

New Mexico Highlands University



At New Mexico Highlands University (NMHU), the ISG award was used to acquire instrumentation for analysis of the temperature and heat-energy transfer of materials, and for obtaining large crystalline samples of materials. This involved differential scanning calorimetry (DSC), a method that can be used to measure a number of characteristic properties of materials for understanding phase (gas-liquid-solid) changes and whether materials can store energy in a certain phase. Two faculty members, two graduate students, and two undergraduate students are involved in research related to charge transfer materials and metal organic frameworks with luminescent properties. The team has submitted three proposals to NSF and one to the Department of Energy that will employ instrumentation acquired through this award. The instrumentation is also included in laboratory components of Physical and Analytical Chemistry courses at NMHU.

Santa Fe Community College

The Santa Fe Community College (SFCC) ISG provided funding for sensors used by students focused on monitoring the commercial-scale photobioreactors at the SFCC Biofuels laboratory. Students study how pH, operating temperatures, chlorophyll content and other parameters affect the maximum algae production and biomass densities. The new sensors allow students and faculty to replicate growth conditions optimized in a lab setting to determine if they can be scaled up to industrial production levels. Capturing data in real time under continuous operation allows researchers to determine the performance of the photobioreactors and optimizes long-term microalgal biomass productivity.