



Hanqing Pan, PhD student at NM Tech under Dr. Michael Heagy, uses the EPSCoR-purchased solar simulator in her lab

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## ENERGIZE NEW MEXICO **SOLAR ENERGY**

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YEAR 3 ANNUAL REPORT: RESEARCH

The *Energize New Mexico* Solar Energy team formed to address challenges involved in making solar energy a sustainable and practical investment. The team is specifically focused on the effectiveness and efficiency of solar energy devices, and the feasibility of alternatives to fossil fuels by using solar power to convert carbon dioxide into methanol.

*With over 300 days of sunshine every year, New Mexico is prime real estate for solar energy research. Energize New Mexico utilizes these abundant solar resources to meet our energy needs and stimulate economic development.*

The Center for High Technology Materials at UNM now includes a fully operational magnetophotoluminescence facility. The facility will be used to characterize nanoparticle catalysts that can convert CO<sub>2</sub> into alternative fuels, and ultimately will help to design more efficient organic solar photovoltaic cells. Working at the molecular level, researchers at UNM, NMSU, and NM Tech continue to study how bonding between certain types of material can result in high energy output from the molecules, called excited state lifetimes.