

The purpose of this center is to explore, optimize and exploit the unique physics of solution-processed nanomaterials to boost the efficiency of solar energy conversion through novel light-matter interactions, controlled excited-state dynamics, and engineered carrier-carrier coupling.



RESEARCH PLAN AND DIRECTIONS

Our approach is to focus on controlled exploitation of novel physical phenomena that arise in nanomaterials, such as carrier multiplication, engineered carrier dynamics and carrier-carrier coupling, and defect-tolerant excitonic transport. The desired outcome of this work is low-cost photovoltaics with conversion efficiencies that *reach or exceed thermodynamic limits* based on nanostructures fabricated via scalable chemical methods.