

Graduate positions available at the Center for Ultrafast Dynamics and Catalysis in Emerging Materials (C-UDCEM) starting Fall 2022

The PREM Center for Ultrafast Dynamics and Catalysis in Emerging Materials (C-UDCEM) at the University of Central Florida (UCF) is seeking to hire four motivated graduate students interested in a PhD in the fields of Physics, Materials Science and Engineering, and or Environmental Engineering. A BS with outstanding GPA in related areas, but not limited to Physics, Chemistry or Engineering is required. It is anticipated that two of the positions will start in January 2022 while the other two positions will start in Fall 2022.

C-UDCEM is dedicated to providing research and career opportunities to underrepresented minority students seeking to make **fundamental advances in materials research** and **a clear, confident path towards their success in future professional endeavors**. The student will be part of an interdisciplinary team at UCF and the University of Washington, Seattle. Some annual travel between Orlando and Seattle including a summer stay at UW *is* required. The prospective candidate's PhD research topic will be either in the area of catalysis or in quantum materials. In catalysis, research in the fundamental science of how single atoms act as catalyst centers will be explored. The learnings will be translated into real-world powder catalysts and studied for engineering applications. In quantum materials research, light-matter interaction processes in two-dimensional as well as bulk magnetic and non-magnetic quantum materials will be investigated using ultrafast lasers on a timescale of femtosecond to realize photoinduced phase transitions. The research outcome will help to engineer materials with completely novel characteristics.

Based on the candidate's background and in consultation with the principal investigators of the Center, a candidate may seek admission to the Departments of Physics, Materials Science and Engineering, or Civil, Environmental and Construction Engineering.

Interested applicants are requested to send their detailed CV showing their GPA, demographic information, the area of research interests, and names of three references via email to cudcem@ucf.edu and cc saiful@ucf.edu. The CUDCEM website is at www.prem.cecs.ucf.edu. Selected candidates will be asked to formally apply to UCF's graduate program at: <https://graduate.ucf.edu/admissions/>