



UMBC

CHEMICAL BIOCHEMICAL AND ENVIRONMENTAL ENGINEERING

Available Ph.D. Position in Electrochemical Materials

Job Description: Overview: We are looking for a motivated student who can start in Fall 2025 semester in the Department of Chemical, Biochemical and Environmental Engineering at the University of Maryland - Baltimore County (UMBC). Ph.D. student will investigate chemo-mechanical instabilities in electrochemical materials for environmental remedy and energy storage, in collaboration with Dr. Teng from Worcester Polytechnic University. Detailed project descriptions and planning will be undertaken directly with the successful candidate. Students with Chemical Engineering, Mechanical Engineering, Materials Science, Chemistry or Physics background are encouraged to apply.

Our Offer: The student will develop exceptional skills and expertise in the areas of electrochemistry, defect chemistry, mechanics of materials, and material fabrication during his/her studies. The student will learn operando techniques to monitor stress /strain evolution in the electrodes. The selected candidate will present their work at international conferences such as AIChE and ECS.

About Our Group: Advanced Materials & Electrochemistry for Energy (AMEE) Research Group is established by Prof. Özgür Çapraz and is recently relocated to Chemical, Biochemical and Environmental Engineering in the University of Maryland Baltimore County. The group has been funded by various agencies such as NSF, DOE, NASA, Air Force, and BSF. Students in our group has published in high impact factor journals such as Advanced Energy Materials, Nano Letters and J. Power Sources. The group alumni are currently working as either scientists in Universities, National Laboratories or engineers in battery companies. For more information about the group, please visit, <https://amee.umbc.edu/>.

About the University: University of Maryland, Baltimore County (UMBC) is a top-ranked university with an inclusive culture that connects innovative teaching and learning, research across disciplines, and civic engagement. The university is located in the suburb of vibrant Baltimore city. The location offers direct access to wonderful outdoor activities (beaches, mountains, forest and state parks), museums in DC - Baltimore area and international airports. Also, it is close to government agencies and industrial companies.

How to Apply: Interested candidates are encouraged to send their CV, transcript and a short cover letter to amee@umbc.edu with the title of "Application to PhD position in AMEE Lab". Please follow the application guideline as described in the department website.