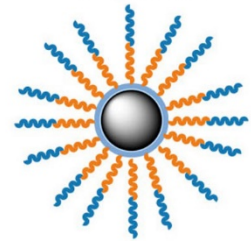




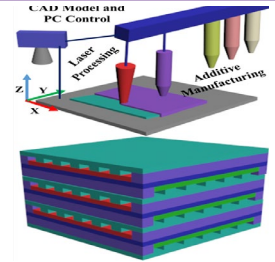
The Department of Materials Science and Engineering at Clemson University invites applications for 5 PhD student positions in the research groups of Professors Kai He, O. Thompson Mefford, Jianhua "Joshua" Tong, Ulf D. Schiller, and Ming Tang. The anticipated start date is August 15, 2021. Individuals with BS and MS degrees in Materials Science and Engineering or related fields such as Chemistry, Physics, Chemical Engineering, Bioengineering, Environmental Engineering, and Mechanical Engineering can apply.

Position I: Prof. Mefford group. The research will be focused on controlled synthesis of ferrite nanoparticles and their functionalization with thermally responsive polymers for biomedical, energy, and environmental applications. Students should be prepared for heavy emphasis on materials synthesis and interdisciplinary collaborations allowing for the adoption of multiple fields. For further information, contact Prof. Mefford at mefford@clemson.edu
Web: meffordresearch.com

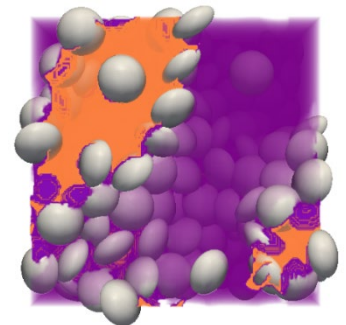
Magneto-thermoreponsive nanoparticle



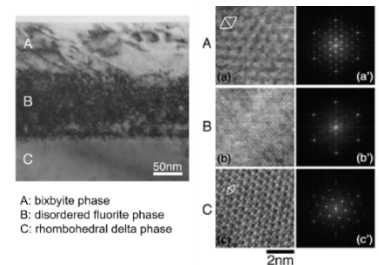
Position II: Prof. Tong group. The research will be concentrated on energy materials/devices and advanced manufacturing. The specific research topic is additive manufacturing of fuel-flexible high compacted protonic ceramic fuel cells. Integrated additive manufacturing and laser processing will be used to fabricate the single cells and modules. For further information, contact Prof. Tong at jianhut@clemson.edu Web: cecas.clemson.edu/tonggroup/



Position III: Prof. Schiller group (Computational Materials Science) The research concerns controlled self-assembly of complex emulsions for bottom-up fabrication of micro and nanostructured materials. The student will use multiscale modeling and computer simulations to investigate the kinematics of phase segregation and interfacial stabilization in particle-fluid mixtures. Students should have excellent mathematical skills and be prepared to learn scientific programming for high-performance computing. For further information, contact Dr. Ulf Schiller at uschill@clemson.edu. Web: cecas.clemson.edu/compmat



Position IV: Prof. Tang group. The research will be focused on development and processing of advanced materials including nuclear waste forms and fuel forms (fabrication, radiation/thermal/chemical stability test), cladding materials (microstructure/radiation/oxidation), functional ceramics, ceramic thin films, and ceramic/metal composites. Radiation will be used as a tool to induce damage, modify thermodynamic process and form novel materials. For further information, contact Prof. Tang at mingt@clemson.edu
Web: clemson.edu/cecas/departments/mse/people/faculty/tang.html



Position V: Prof. He group. The research will be focused on energy materials and devices such as batteries and fuel cells. The student will use advanced in-situ electron microscopy to probe the dynamic evolution of structural and chemical properties on the atomic level and in real time. For further information, contact Prof. He at kaihe@clemson.edu Web: cecas.clemson.edu/helab/

