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## Ph.D. positions in Advanced Materials Manufacturing & Processing

The Advanced Materials Processing (AMP) Research Laboratory at the Virginia Commonwealth University Department of Mechanical and Nuclear Engineering (VCU-MNE) is seeking a motivated Ph.D. candidate to pursue experimental research in the intersecting areas of materials physics, metallurgy and mechanical engineering (starting Spring 2019). The AMP Research Group is led by Dr. Radhika Barua and its main research focus is centered on developing multifunctional magnetic materials systems for energy-related applications, mainly thermal energy harvesting and solid-state cooling. A significant part of the experiments will be carried out at the National Synchrotron Light Source (NSLS-II) in Brookhaven National Laboratory, NY and the Critical Materials Institute (CMI) in Ames Laboratory, Iowa.

The successful candidate should have a background in materials science with an interest in synthesizing bulk intermetallic alloys using conventional, as well as metal additive manufacturing techniques. Preference will be given to students who are familiar with structural, electronic and thermal materials characterization tools (examples: powder x-ray diffraction (XRD) with rietveld analysis, differential scanning calorimetry (DSC), scanning electron microscopy (SEM), magnetic force microscopy (MFM) *etc.*). Knowledge of SQUID magnetometry and experience working in a synchrotron setting is advantageous but not strictly required.

The applicants must have an undergraduate degree in a discipline related closely to Mechanical, Chemical or Materials Science Engineering. The position covers tuition and fees and includes a starting salary of \$26,000/year. More information about the AMP Research Lab can be found at <http://AMP.egr.vcu.edu> and inquiries about the position should be addressed to Dr. Barua at [rbarua@vcu.edu](mailto:rbarua@vcu.edu).

### *About VCU and Richmond, VA:*

Virginia Commonwealth University is a R1 urban public research university located in downtown Richmond, Virginia. The Monroe Park Campus houses most of VCU's general education facilities; the MCV campus comprises the VCU Medical Center, all VCU's Health Sciences Schools, the Massey Cancer Center and several hospitals; and the Virginia Biotechnology Research Park houses more than 60 public and private bioscience companies, research institutes, and prominent state and national medical laboratories. The School of Engineering is composed of five departments and several research centers and enrolls nearly 2,000 undergraduate students and approximately 300 graduate students. VCU is currently undergoing a stage of substantial growth primed by President Rao's Quest for Distinction Strategic Plan. Along this plan, VCU School of Engineering aims to become a top 50 research program, increase student enrollment and funded research, and most importantly, leverage VCU Medical Center to focus on health-related cross-disciplinary areas such as pharmaceutical engineering, regenerative medicine and medical device design and development. Richmond, VA consistently ranks as one of the best cities to live in the US and combines the amenities of a major metropolitan area with the charm and convenience of a small historic town, plus the scenic Blue Ridge Mountains, Washington, DC, and the Atlantic Ocean just a short road-trip away.

***How to apply for graduate admission?***

Your application package generally includes, among others, a 1-page cover letter, your current curriculum vitae that highlights your qualifications and achievements, three reference contacts (referents name, position/title, affiliation, and email address), B.S. and M.S. transcripts (unofficial is ok now but official will be needed), GRE and TOEFL (if applicable) scores, and a one-page essay/writing sample that describes your academic interests, career goals, and work and study experience. These documents should be sent to Dr. R. Barua ([rbarua@vcu.edu](mailto:rbarua@vcu.edu)) as single pdf file with “VCU-MNE AMP-Lab application – your last name, first name” as subject line. For the detailed application procedures and deadlines of the MNE Graduate Program, please refer to <http://www.egr.vcu.edu/academics/grad-degrees/mne/>

**EEO/AA Policy:** Virginia Commonwealth University is an equal opportunity, affirmative action university providing access to education and employment without regard to age, race, color, national origin, gender, religion, sexual orientation, veteran’s status, political affiliation or disability. More information about specific actions and policies currently underway at VCU can be found at <http://equity.vcu.edu/>