

National Science Foundation Awards MRI Program Grant to Acquire High Resolution Scanning Electron Microscope



Kumar



Gupta



Schlaf

(August 26, 2009) The National Science Foundation MRI program has awarded a grant of \$478,800 (\$684,000, including USF match) to acquire a high resolution scanning electron microscope (HRSEM) for interdisciplinary research and education. With ultrahigh-resolution and optimized analytical functionality the microscope will improve the research infrastructure by providing the opportunity to conduct high-quality research as well as develop creative partnerships with industry.

“Establishment of an HRSEM capability to support these activities will leverage current and future funded programs,” said **Dr. Ashok Kumar**, Principal Investigator. The Co-PIs are **Matthias Batzill** (Physics); **Xiao Li** (Chemistry); **Vinay Gupta** and **Rudy Schlaf** (Electrical Engineering). In addition, 10 other faculty participants contributed to win this grant from the NSF as well as the staff research engineers at the Nanomaterials and Nanomanufacturing Research Center (NNRC).

The HRSEM instrument will be a major addition to the infrastructure and capabilities of the NNRC, which serves more than 200 student users and 60 faculty members from the College of Engineering and the College of Arts and Sciences who will have shared access to the tool. The NNRC has been a major catalyst for numerous inter-disciplinary research endeavors assisting faculty members to win federal competitive research and education grants. This state-of-the-art instrument is expected to have significant impact on research, education, research training, and infrastructure building at USF. The Nanotech I facility supports the research projects of faculty, graduate students, undergraduates and industrial researchers. For further information please see <http://nnrc.eng.usf.edu>.

The Major Research Instrumentation Program (MRI) serves to increase access to shared scientific and engineering instruments for research and research training in the nation's institutions of higher education, museums and science centers, and not-for-profit organizations. This program especially seeks to improve the quality and expand the scope of research and research training in science and engineering, by providing shared instrumentation that fosters the integration of research and education in research-intensive learning environments. Development and acquisition of research instrumentation for shared inter- and/or intra-organization use are encouraged, as are development efforts that leverage

the strengths of private sector partners to build instrument development capacity at academic institutions.

The University of South Florida is one of the nation's top 63 public research universities and one of only 25 public research universities nationwide with very high research activity that is designated as community engaged by the Carnegie Foundation for the Advancement of Teaching. USF was awarded \$380.4 million in research contracts and grants in FY 2008/2009. The university offers 232 degree programs at the undergraduate, graduate, specialist and doctoral levels, including the doctor of medicine. The USF System has a \$1.8 billion annual budget, an annual economic impact of \$3.2 billion, and serves more than 47,000 students on institutions/campuses in Tampa, St. Petersburg, Sarasota-Manatee and Lakeland. USF is a member of the Big East Athletic Conference.

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