

January 24, 2006

MEDIA RELATIONS SOURCE

Pat Lichtman
(989) 774-1641

CMU SOURCE

Bradley Fahlman
(989) 774-1195
fahlm1b@cmich.edu

CMU DISCOVERY OPENS PATH FOR NANO-APPLICATIONS

MT. PLEASANT, Mich.—Central Michigan University’s first report on the controlled growth of metal oxide nanoparticles using a dendrimer architecture will provide unprecedented opportunities for industrial applications.

A study by CMU Professor Bradley Fahlman and six CMU students explains the use of a simple oxidation method to create metal oxide nanoparticles using carbon dioxide, but without high temperatures or moisture-sensitive reagents.

“There are many reports of growing metal nanoparticles, but metal oxide nanoparticles have not been grown before by using dendrimers,” said Fahlman. “Metal oxides are of even greater use for sensors, catalysis and microelectronics applications. The increased surface area of our nanoparticulate oxides, relative to bulk powders, will ensure a high level of activity for any application that involves a surface absorption pathway (such as drug molecules).”

The results of the study, “Facile Synthesis of Tin Oxide Nanoparticles Stabilized by Dendritic Polymers,” by Fahlman and CMU students — Venkateswarlu Juttukonda, Robert L. Paddock, Jeffery E. Raymond, Dan Denomme, Andrew E. Richardson and Laura E. Slusher — is published online in the Journal of the American Chemical Society at <http://dx.doi.org/10.1021/ja056902n> and will appear in print shortly.

###