

## **60a High School Science Teachers Use Scientific Inquiry in Nanotechnology to Build Instructional Frameworks**

*David M. Ford, Michael A. Bevan, Ali Beskok, and Jane F. Schielack*

The Information Technology in Science (ITS) Center for Teaching and Learning at Texas A&M is an interdisciplinary graduate program that seeks to replenish the nation's supply of science education specialists through team-led opportunities involving scientists, education researchers, and education practitioners. We present our findings as the scientists and education researchers on the ITS Nano-Science Team. Our team provided a three-week on-campus experience for 13 science teachers at the middle and high school levels. The teachers spent half of their time on scientific inquiry into experimental and computational nanotechnology in our research laboratories (e.g. nano-fluidics, colloidal phenomena, and molecular modeling). The balance of their time was spent designing an instructional framework through which their knowledge could be transferred to classroom experiences for their students. Progress was measured by pre- and post-assessments on fundamental concepts in nanotechnology, as well as reports of eventual implementation in the high school classrooms.