

## **MML Teaches Class on Nanomechanical Properties with the Atomic Force Microscope (AFM)**

NIST recently participated as “faculty” in a three-day class on AFM and Instrumented Nanoindenting: Techniques and Instrumentation hosted by Asylum Research. The class was held from 16 to 18 August at the company’s headquarters in Santa Barbara, CA. It was designed for beginner-to-intermediate AFM users seeking a greater understanding of characterization techniques for nanoscale mechanical properties. Morning lectures were combined with hands-on experimental sessions in the afternoon to teach basic theory and instrumentation plus different scanning modes to probe properties such as elastic modulus, hardness, and adhesion. Attendees comprised faculty and staff at both domestic and foreign universities, national labs, and industrial research centers who intend to apply these techniques to a broad spectrum of materials applications including polymer blends and nanoparticles. The lecture and lab session taught by NIST involved contact resonance methods for quantitative AFM modulus mapping, an area in which MML are world leaders. Teaching the class was an opportunity for NIST to disseminate its measurement technology and engage potential end users. This was the first time the class was held. However, student feedback was very positive, and future classes are under consideration.

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