

Abstract Submitted
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Making the Nanoworld Accessible: Nanoscience Education Using Scanning Probe Methods¹ DANIEL KNORR, JASON KILLGORE, TOMOKO GRAY, DAVID GINGER, JOSEPH WEI, YEECHI CHEN, MEHMET SARIKAYA, HANSON FONG, TOM GRIFFITH, RENE OVERNEY — A partnership between researchers and educators at the University of Washington, North Seattle Community College and two companies, Nanosurf, AG and nanoScience Instruments has been forged to develop a nationally replicable model of a sustainable and up-to-date undergraduate teaching laboratory of scanning probe microscopy (SPM) methods applied to nanoscience and nanotechnology. Within this partnership a new paradigm of operating and maintaining a SPM laboratory has been developed that provides a truly hands-on experience in a classroom laboratory setting with a small student to instrument ratio involving a variety of SPM techniques and topics. To date, we have run a first successful undergraduate laboratory workshop, where students were able to have extensive hands-on experience on five SPM modes of operation including: electrostatic force microscopy involving photovoltaic polymeric materials, tunneling microscopy and the determination of the workfunction, and nanolithography using the dip-pen method. http://depts.washington.edu/nanolab/NUE_UNIQUE/NUE_UNIQUE.htm

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Daniel Knorr

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