



# PCCM hosts successful high-school junior researchers

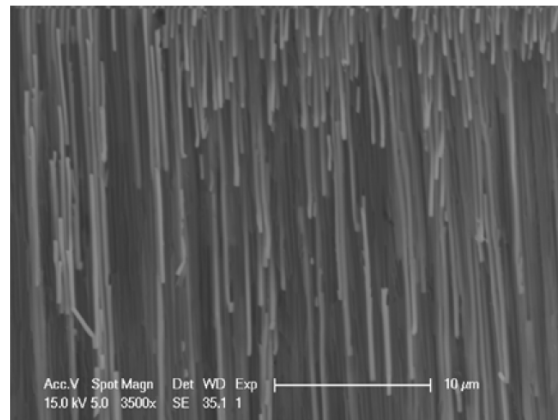
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PCCM has had many successful partnerships with Liberty Science Center (LSC), New Jersey's premier science center, which has served more than 9 million guests since 1993. PCCM scientists host high school students as part of the LSC's "Partners in Science" research program for high school students; most recently, these included high-school junior Moyukh Chatterjee whose project "Growth and imaging of Bi nanowires" supervised by Jason Petta (IRGA, IRGD & NSF Career) won many awards including First in the Upper Physics category of the Jersey Shore Science Fair ; First in the 11th grade physics category and 2nd place in 11th grade overall at the Delaware Valley Science Fair ; 3rd place in the Engineering category in the Junior Science and Humanities Symposium.

Another highly successful PIS student Franz Saur (advised by Nan Yao) won the 2007 Grand Prize in the AFCEA National High School Science Fair competition for his research, "Towards Making the Smallest Tool Machine for Nanotechnology: Engineering an Aberration Corrector for Focused Ion Beam (FIB) Microscopes".

(Right) Micrograph of a "lawn" of bismuth nanowires grown by Chatterjee. The bismuth nanowires are 100-200 nanometers in diameter and 10-20 microns in length. Scale bar is 10 microns.



Moyukh Chatterjee (above) built a high vacuum system that allowed us to deposit Nb metal into 200 nm diameter pores in an aluminum oxide template. The template was then etched away, leaving behind Bi nanowires. The wires were then imaged in a scanning electron microscope (left) and analyzed in a transmission electron microscope.