

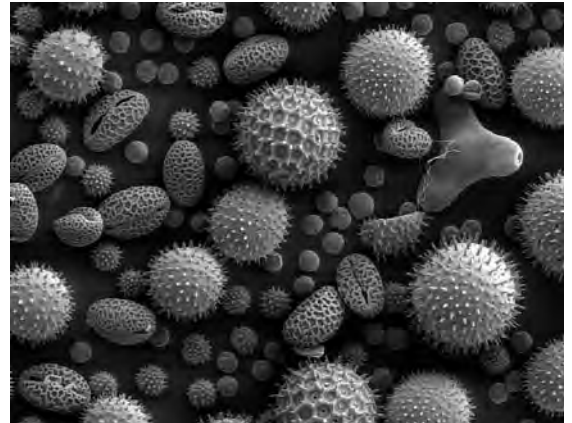
# We Have Vision! Angstrom Scientific Loans Scanning Electron Microscope to NPHS Engineering Academy Students

North Penn High School Engineering Academy, The Future is N.E.A.R. (Nanotechnology Education and Research)

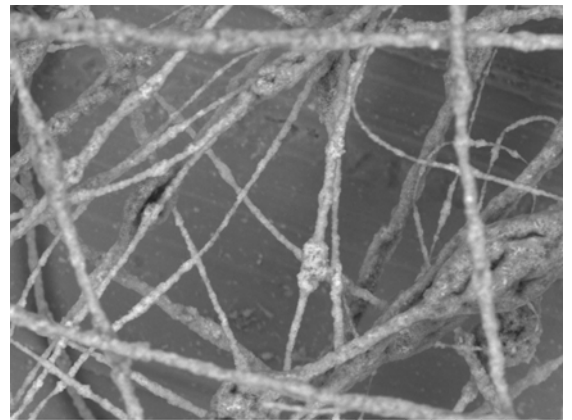
**Lansdale, Pennsylvania—February 15, 2015**— On Friday, the Engineering Academy seniors at North Penn High School received, on loan, a scanning electron microscope (SEM) from Angstrom Scientific to aid in the characterization of their research.

A Scanning Electron Microscope allows users to observe specimens at an extremely high magnification utilizing a high energy, focused beam of electrons. More traditional microscopes found in a typical high school classroom utilize light which significantly limits the magnification and size of objects it can observe.

For example, the image to the right shows what common pollen looks like under the magnification of an SEM. This image was taken at 500X.



The next image shows titanium dioxide nanofibers spun by students this year that were analyzed during an open lab this past Saturday morning. These fibers are shown at a 1500X magnification and are unique in that they create a voltage when exposed to sunlight. The  $\text{TiO}_2$  fibers are a part of the Valence research team's endeavors this year to create a better solar cell than the traditional materials currently produced.



NPHS 0038 2015/02/14 09:50 AL D6.6 x1.5k 50 um  
Valence: T-01 Unannealed

Many other endeavors in the N.E.A.R. program are underway this year such as antibacterial nanofabrics, conductive polymer nanofibers, melt-spun polymer fibers and superconductive nanofibers!

Students in the Future is N.E.A.R. program of North Penn High School's Engineering Academy have been performing nanotechnology research this year as part of the academy's capstone course, Engineering Design and Development (EDD). In EDD, students work in teams to design and develop an original solution to a valid open-ended technical problem by applying the engineering design process. Paralleling the EDD course is a program unique to North Penn High School called The Future is N.E.A.R. (Nanotechnology Education And Research). This program is designed to offer the students of the NPHS Engineering Academy opportunities to research and develop solutions to global issues by capitalizing from the fundamentals of nanotechnology and materials science. A final presentation is offered to the community at the end of the school year on June 3<sup>rd</sup>, 2015 at 7pm in the audion of the North Penn High School.



**Angstrom Scientific, Inc.** located in Ramsey, NJ is a distributor and manufacturer's representative, focused on providing characterization solutions to the nanotech marketplace in the Americas.

For more about their research, the Engineering Academy or the Technology and Engineering Education Department, please visit their websites: [www.northpennengineering.org](http://www.northpennengineering.org) or [www.thefutureisnear.org](http://www.thefutureisnear.org).



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