# Webinar







#### FREE WEBINAR

## **Characterizing Photonics Devices with** Transmission Electron Microscopy

Join us for a Webinar on Fri, Feb 10, 2017 1:00 PM - 2:00 PM EST

This webinar will help advance your understanding of light-matter interactions at the nanoscale, an area that holds great promise for increasing speed in computers and communications.

Thanks to recent advances in electron optics, a new generation of transmission electron microscopes (TEMs) have become available which are capable of image resolutions better than 0.1 nm and spectroscopic resolutions better than 0.4 eV. The instruments can accommodate special purpose sample stages that convert these microscopes into true experimental nanomaterials laboratories, enabling experiments that are crucial to the advancement of nanoscience and nanotechnology. What does this mean for photonics technologies? Join Brookhaven's Eric Stach for this webinar to find out!

Stach will talk about the ways that TEM can be used to take images of the structure of photonics devices at the Angstrom to micron scale. He will discuss how diffraction can be used to characterize crystal structure; and how chemical spectroscopy can be used to determine chemical speciation and electronic structure at the nanoscale. He will also cover sample preparation methods that allow site-specific characterization of individual devices. Throughout his presentation he will draw on examples of applications issues from current literature, using them to share his own understanding and approach to these issues.

Stach leads the Electron Microscopy Group in the Center for Functional Nanomaterials (CFN) at the Brookhaven National Laboratory. His research focuses on the development and application of electron microscopy techniques to solve materials problems in nanostructure growth, catalysis, thin film growth and materials deformation. Stach received his Ph.D. in Materials Science and Engineering from the University of Virginia and has worked as a staff scientist and principal investigator at the National Center for Electron Microscopy at the Lawrence Berkeley National Laboratory and as a professor at Purdue University, where he retains an adjunct appointment. He is a Fellow of the Microscopy Society of America, and is a cofounder and chief technology officer of Hummingbird Scientific.

### MARK YOUR CALENDAR

Date: Fri, Feb 10, 2017 Time: 1:00 PM - 2:00 PM EST

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Required: Windows® 10, 8, 7, Vista, XP or 2003 Server

Mac®-based attendees

Required: Mac OS® X 10.6 or newer

Mobile attendees

Required: iPhone®, iPad®, Android™ phone or tablet, Windows 8 or Windows Phone 8

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