

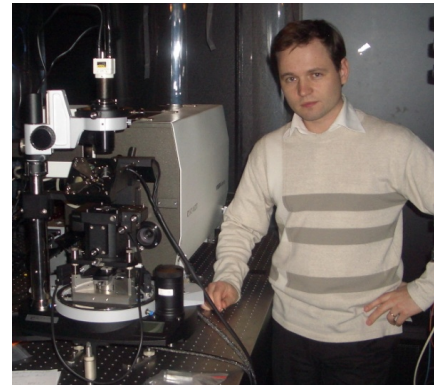
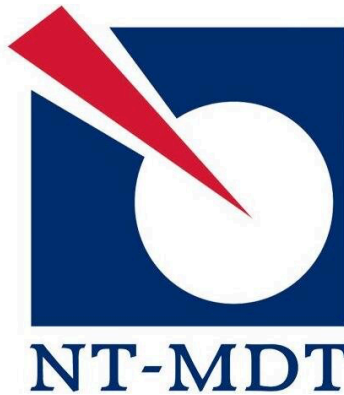


OSA & SPIE Purdue Student Chapter NT-MDT Tech Talk

Tech Talk by Dr. Pavel Dorozhkin, Head of Product Development and Applications Department

At NT-MDT we are developing commercial equipment integrating scanning probe microscopy and all kinds of optics; including related experimental techniques and applications. In particular, we are working on the following super-resolution near-field techniques using scanning optical nano-antennas:

- aperture scanning near-field optical microscopy (SNOM): using both fiber- and cantilever- probes
- scattering- (apertureless-) SNOM
- nanoscale infrared microscopy (nano-IR)
- tip-enhanced Raman scattering (TERS, nano-Raman) & tip-enhanced fluorescence and some others



Dr. Pavel Dorozhkin started at NT-MDT in 2005 as a head of R&D team designing optical equipment and methods integrated with atomic force microscopy (AFM). Currently he is a head of product & applications development. He is in charge of all aspects of NT-MDT product line integrating (AFM) with optics (Raman & fluorescence microscopy, Tip Enhanced Raman Microscopy, Scanning Near-Field Optical Microscopy of various types etc.) as well as some other lines of equipment. Dr. Dorozhkin and his team develop equipment, probes, methods and applications in this field. Dr. Dorozhkin received his PhD degree in 2003 in the Institute of Solid State Physics of the Russian Academy of Sciences (Chernogolovka, Russia). His experimental work was focused on optical spectroscopy of individual semimagnetic quantum dots at helium temperatures and high magnetic fields. He also did research on electrical transport and optical spectroscopy of low-dimensional electron systems. Pavel Dorozhkin's research expertise also includes investigation of mechanical, electrical and electron field emission properties of semiconductor nanowires and carbon nanotubes (at National Institute for Materials Science, Tsukuba, Japan).



February 27th, 2-3pm, BRK 1001
Food and beverages will be provided.



Contact us: osa.purdue@gmail.com

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