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Puneit Dua joined the Nanofabrication facility at the Pennsylvania State University in August 2004. She received her degrees in Electrical Engineering - Ph. D. 2005 and M.S. 1998, from the University of Connecticut, Storrs and M. Tech. (Applied Optics) from the Indian Institute of Technology, Delhi, India.

As a Technical Liaison at the Nanofabrication Facility, Puneit supports the users in fabrication and characterization. She specifically assists users with the WITec Mercury 100 AFM, Alpha SNOM and CRM 200 Raman Microscope. These areas are crucial to supporting chemical nanofabrication research. Puneit trains the users on the instruments and helps them to use the equipment for special applications. Puneit is currently supporting users involved with:

- Fabrication
- 3-D imaging of Casein - Kinesin systems in buffer solutions using the AC Mode AFM in wet cell.
- Probing nano-scale forces with AFM for molecular sensors.
- The study of Surface Plasmon Resonance (SPR) and its application to nano-bio sensors.

Puneit has extensive research experience in the field of fiber optics and optical communication systems. From March 2000-May 2004, Puneit was a research assistant in Dr. Niloy K. Dutta's laboratory at the University of Connecticut where she built a high power Er/ Yb co-doped double clad fiber amplifier and studied the applications of such an amplifier and the effects of incorporating it in various fiber optic communication systems. Her research included:

- Experimental demonstration and numerical simulation to explore in detail a variety of observable nonlinear effects due to the high intensity of the optical powers confined in micron-sized cores of the fibers, for e.g. Composite second order (CSO) distortion in CATV systems.
- Theoretical analysis of a wavelength division multiplexed (WDM) system with closely spaced channels to show that crosstalk can occur due to the four-wave mixing products generated inside the high power Er/Yb DCFA.
- Modeling of parametric amplification due to four-wave mixing to analyze its application for short pulse generation and high speed optical time division multiplexing.