

Physical SEMINAR

“Waveguide-Enhanced Raman Spectroscopy for Trace Chemical Detection”

Dr. Todd Stievater

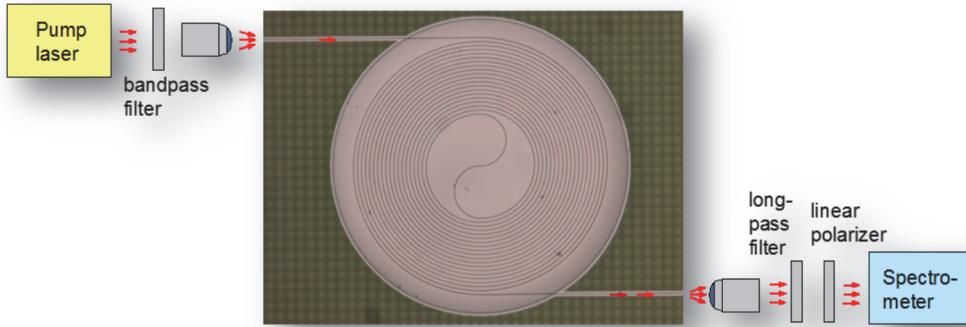
Naval Research Laboratory

Monday, April 30th, 4:00pm

Hutchison Hall 473

University of Rochester

Department of Chemistry



Abstract

In this talk I will describe the detection of trace concentrations of chemical agents using Waveguide-Enhanced Raman Spectroscopy (WERS). To achieve this, we combine evanescent nanophotonic waveguides, sorbent polymers, and Raman scattering to detect parts-per-billion levels of chemical warfare agent simulants. I will also describe our project to demonstrate WERS using devices fabricated at a Photonic Integrated Circuit foundry (AIM Photonics), including the remaining steps necessary for a prototype fully-integrated, handheld chemical agent detector.

Host: Ben Miller, email: Benjamin_Miller@urmc.rochester.edu

