UNIVERSITY OF RHODE ISLAND
Department of Chemistry
SEMINAR
Room 105 Beaupre
3:00 P.M., Monday, Oct. 25, 2021

Prof. Lyubov Titova
Worcester Polytechnic Institute
Worcester, MA

“Terahertz spectroscopy:
conductivity and optical properties of 2D materials”

HOST
Dugan Hayes
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Two-dimensional, or 2D, materials are attracting considerable attention as a testbed for new physics and as candidates for applications in flexible nanoscale high-speed optoelectronics, solar energy conversion, and chemical sensing. Most unique properties of 2D materials stem from their highly anisotropic optical and electronic properties. Terahertz (THz) spectroscopy provides access to those properties with ultra-high time resolution and without the complications of electrical contacts. I will describe how we apply time-resolved THz spectroscopy to probe ultrafast dynamics of charge carriers in two 2D layered materials with vastly different properties, from semiconducting GeS and GeSe to a new class of metallic 2D materials, MXenes.