

THURSDAY

OCTOBER 25

1315 CHEMISTRY

## Seminar

Presented by

## Prof. Joel A. Pedersen

Depts. of Soil Science, Civil & Environmental Engineering and Chemistry; Environmental Chemistry & Technology Program

## Emerging Environmental Contaminants: Antibiotics, Prions, and Nanoparticles

Terrestrial and aquatic environmental chemistry has historically focused primarily on metals, metalloids, and nonpolar and weakly polar organic compounds. More recently, concerns have emerged about new classes of environmental contaminants including pharmaceuticals, personal care product ingredients, macromolecules, and engineered nanoparticles. The Pedersen group has been investigating fundamental processes impacting the environmental behavior of members of several of these new classes of potential contaminants, particularly their interaction with surfaces and their transformation in the environment. Examples of recent research by the group on the covalent coupling of veterinary antimicrobials to natural organic matter, enhancement of prion disease transmission by environmental particles, and impacts of the weathering of engineered nanoparticles on toxicity will be discussed.

