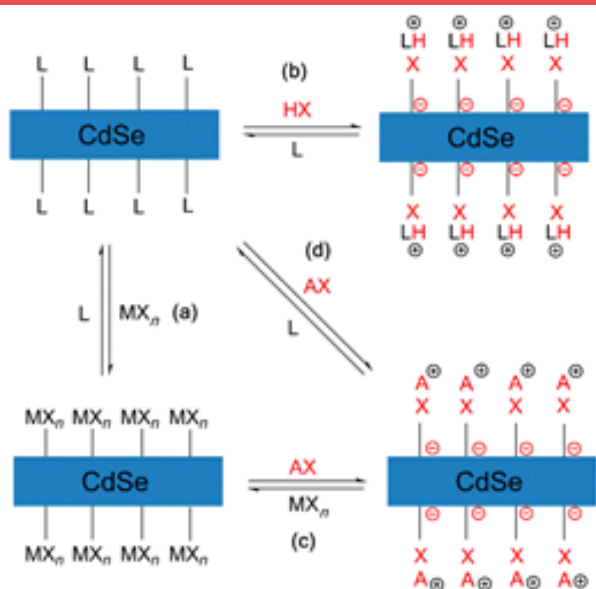


CHEMISTRY COLLOQUIUM

Professor

William E. Buhro

Washington University of St. Louis
Department of Chemistry



Wednesday, April 17, 12:00 pm
140 Hutchison Hall
Lander Auditorium
University of Rochester
Department of Chemistry

Title: "Surface Chemistry of 2D II-VI Nanocrystals"

Abstract: The surface ligation of semiconductor nanocrystals determines their optical and transport properties. Colloidal 2D II-VI (CdSe) nanoribbons and nanoplatelets provide ideal systems for the study of rapid, reversible, and complete exchange of surface ligation at room temperature. Interchange of L-type (Lewis basic), Z-type (Lewis acidic) and X-type (anionic) ligation is observed. The surface exchanges are characterized by a variety of means, and the absorption and emission spectra of the quantum belts are particularly sensitive to surface ligation. Spectral shifts as large as 340 meV are achieved upon ligand exchange. Such surface exchanges promise to optimize the properties of the 2D nanocrystals.

Host: Professor Kathryn Knowles • Email: knowles@chem.rochester.edu