Chemistry Departmental Seminar

Professor Anna Klinkova
University of Waterloo

Friday, August 25, 2023 at 1:00 p.m. (Room: CSF-1302)

**Title:** Structural complexity in synthetic nanoscale electrocatalysts

**Abstract:**
Increasing complexity of nanosynthesis has produced a variety of intricate nanoparticle shapes which have attracted significant attention for applications in electrocatalysis. The nanocatalysts for sustainable electrochemistry related to closing anthropogenically disrupted carbon and nitrogen cycles are of particular interest as they can facilitate meeting several sustainable development goals. This talk will focus on the synthetic approaches to nanoparticles with complex geometries, their stability and reconstruction during electrolysis, facet-dependant electrocatalytic performance, nanoscale surface curvature effects on their activity and selectivity in target reactions, and complex electrocatalytic behaviour in nanoconfinements. These insights aim to provide guidelines for rational structural design of electrocatalysts for sustainable chemistry.