

Dr. Shawn Wettig Biography

Dr. Wettig is an Associate Professor, University of Waterloo, School of Pharmacy as well as the Associate Dean of Science for Graduate Studies, University of Waterloo. Dr. Wettig's research interests lie in the general areas of biophysical chemistry and nanotechnology; in particular at the interface of these two broadly defined areas. This research involves aspects of physical chemistry, solution thermodynamics, biochemistry and cell biology applied to the study of self-assembling systems.

While self-assembly is a readily recognized tool in the design of systems for drug delivery applications, the use of self-assembly in the so-called "bottom-up" construction of nanoparticulate systems for drug delivery applications is an emerging field. A key aspect of this research is the design of novel surface-active compounds (surfactants) that, in addition to providing the desired characteristics of self-assembly and control of particle dimensions on the nanometer size scale, can also provide enhanced pharmaceutical applications such as targeted delivery and/or enhanced bio-distribution of an active compound.