How might a drug delivery technology like polyelectrolyte complexes (PECs) be of any practical use in cleaning your kitchen or doing laundry?

(PECs) are colloidal objects formed through electrostatic interactions of polyelectrolytes bearing opposite charges. Manipulation of the conditions of synthesis can result in stable colloidal particles with dimensions on the order of 100 nm diameter. The molecular weights of the polyelectrolytes and the types of ionizable groups determine the behavior and utility of the PECs at solid-water interfaces and their interactions with micelles. Light scattering and FT-IR techniques can be used to characterize the PECs in solution and at interfaces.

Consumers want products that work well, rapidly, and safely. Major retailers continue to insist on progress in the reduction of the environmental impact of CPG products. Technologies that can deliver on all these attributes are highly desirable.