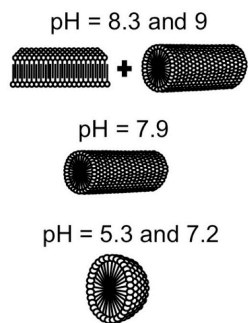
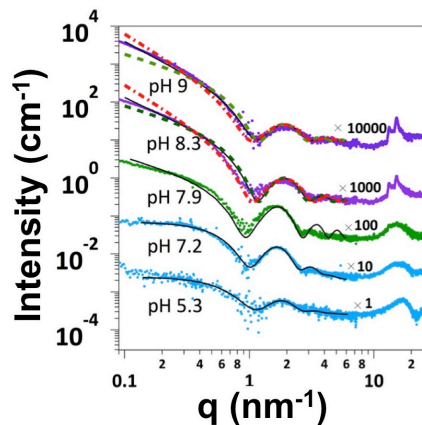


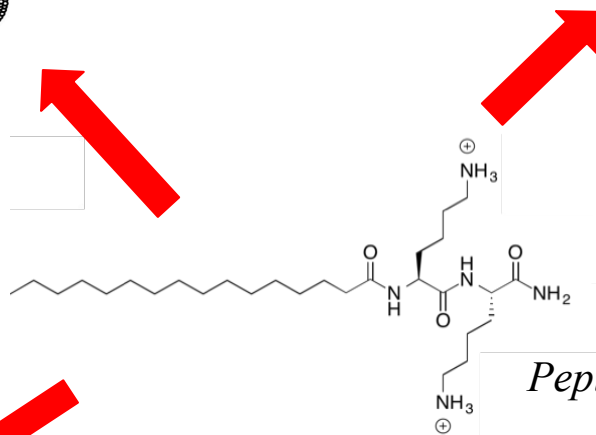
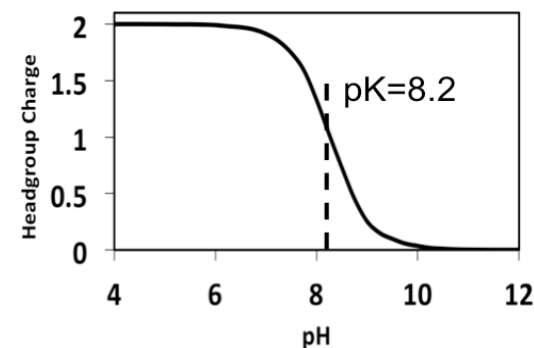
Polymorphism in peptide amphiphile assemblies

Peptide amphiphiles (PA) can assemble in a variety of morphologies. We studied the assembly of a charge-tunable (via pH) ionic PA by a combination of solution small and wide angle X-ray scattering (SAXS/WAXS), cryo-transmission electron microscopy (Cryo-TEM) and Monte-Carlo simulations.

In situ SAXS/WAXS

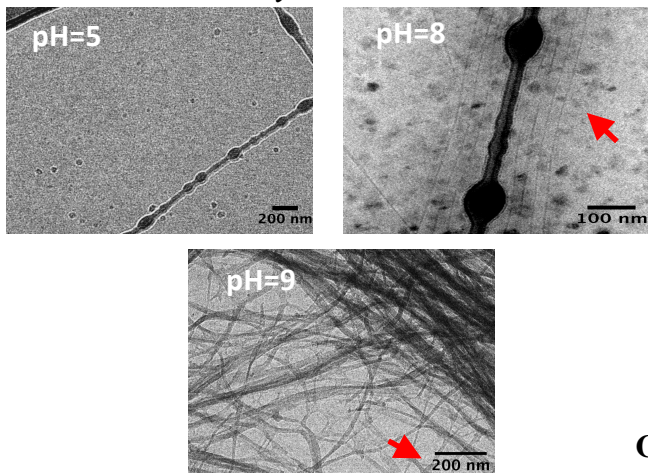


Monte-Carlo simulation for molecular charge



Peptide amphiphile (PA): C₁₆-K₂

Cryo-TEM



C₁₆-K₂ assembly transforms from spherical to cylindrical micelle to crystalline planar bilayers as the charge on C₁₆-K₂ is decreased, revealing how electrostatics drives the transformation in morphology and molecular packing.

Gao, C. Li, H. Olvera de la Cruz, M., Bedzyk, M. J., *J. Phys. Chem. B* 121, 1623-1628 (2017)