# In situ spectroscopic studies of the behavior of polyelectrolyte/surfactant mixtures at the water/TiO2 interface using attenuated total internal reflection Fourier transform infrared spectroscopy (ATR-FTIR) and multivariate least squares data analysis.

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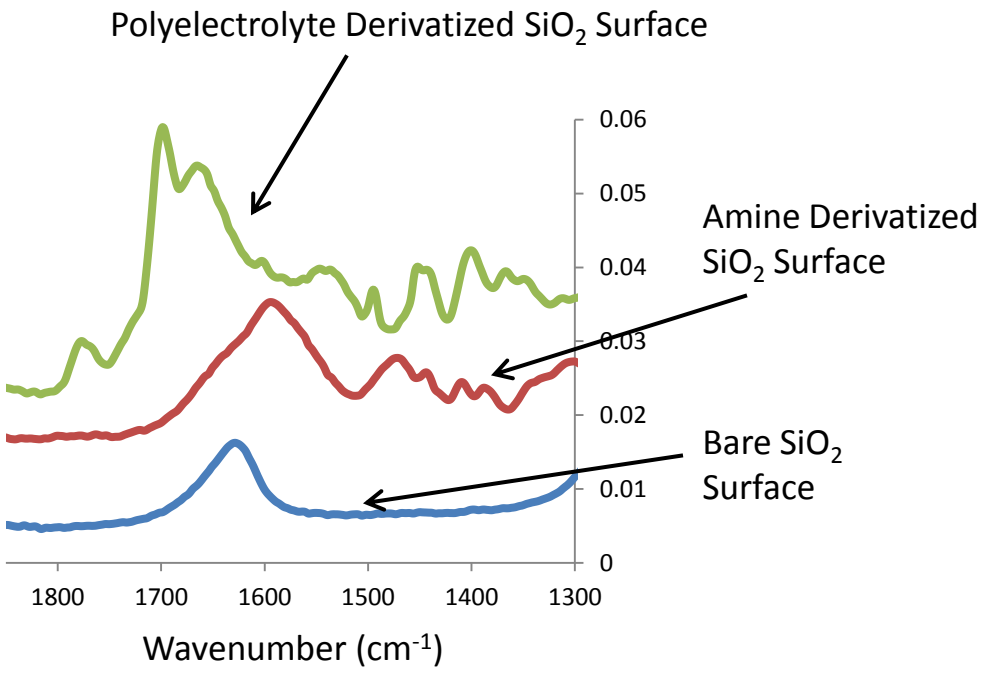
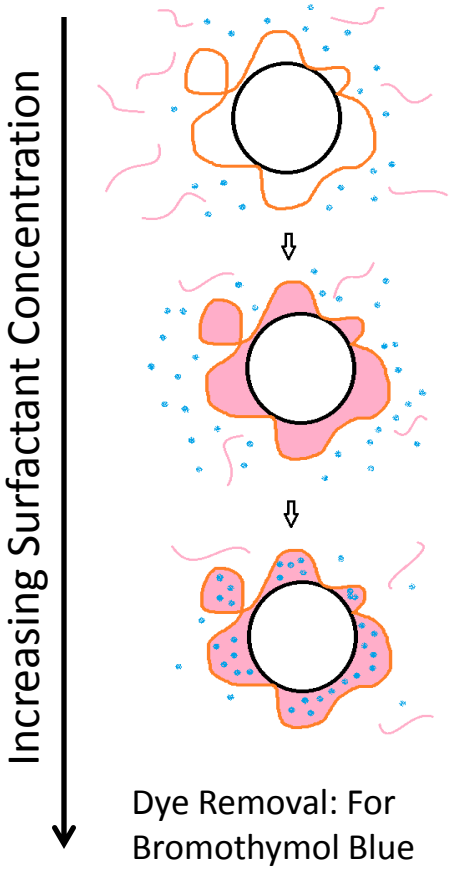
Cartoon of surface modified $SiO_2$ interacting with surfactant (pink lines) and dye (dots). The pink domain is the polyelectrolyte/surfactant complex domain that can interact with the dyes and remove them from solution.

ATR-FTIR spectra of $SiO_2$ at Different Steps in the Surface Modification




Dye Removal: For Bromothymol Blue $1x10^{-6}$ M to $<1x1^{0-7}$M