

Abstract Submitted
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Probing colloidal physics on the nanometer length scale SUNIL SAINIS, Post Doc. Fellow, FRANK VOLLMER, Rowland Junior Fellow — The sharp spectral features associated with ultra-high Q microresonator modes are sensitive to changes in the local environment and surface of the resonator [1]. Microresonator cavities have been used to detect the binding of single molecules [2] and viruses in an aqueous medium. We report on recent experiments that use microresonators to access colloidal physics on the nanometer length scale. We examine shifts in the resonator as a function of bulk ionic strengths and surface adsorption in a colloid.

[1] S. Arnold et al., Nature Methods **5**, 591 - 596 (2008)

[2] A. M. Armani, et al. Science **317**, 783-787 (2007).

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