

Abstract Submitted  
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**Particle interactions in colloids are revealed in a nonlinear effect in light transmission** JINSUK SONG, DANIEL OU-YANG — Studies on interactions between particles in highly concentrated suspensions are rare because the solutions are opaque and the interpretations from methods such as diffusing wave spectroscopy are often complicated. We propose a simple method of probing particle interactions in the opaque solution by measuring light transmission affected by optically induced particle concentration enhancement. The increase in the particle concentration with the input light intensity depends on the interactions between particles. We demonstrate how this method can be used to determine single particle trapping energy and the virial coefficients in aqueous suspensions of 190 nm polystyrene spheres.

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