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Sensing aggregation in highly turbid plasmonic and non-plasmonic colloidal suspensions¹ REY NANN MARK DUCAY, NATHAN PHILIP, JORDAN BOIVIN, PATRICK JUDGE, JASON BERBERICH, JONATHAN SCAFFIDI, LALIT BALI, SAMIR BALI, Miami Univ — We demonstrate a method for sensing the presence of aggregation in highly turbid aqueous suspensions of polystyrene and gold nanospheres. Aggregation is induced either by changing the pH or the ionic strength, by adding small, controlled amounts of an acid or base solution. The particle concentrations used are at least two orders of magnitude higher than previously reported. To the best of our knowledge, this is a first observation of aggregation in highly dense colloidal suspensions without any sample dilution or special sample preparation.

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