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"Recovery of Small Inhomogeneities From the Scattering Amplitude at a Fixed Frequency"

ABSTRACT:

We derive rigorously the leading order term in the asymptotic expansion of the scattering amplitude of a collection of a finite number of dielectric inhomogeneities of small diameter. We then apply this formula for the purpose of identifying the location and certain properties of the shapes of the inhomogeneities using measurements of the scattering amplitude at a fixed frequency.

Joint work with: Habib Ammari, Ekaterina Lakovleva and Shari Moskow