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Lyapunov exponent of the optical radiation scattered by the Brownian particles

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Keywords

light scattering, Lyapunov exponent, sulfur hydrosols, Brownian particles

Abstract

The computer and physical simulation of light scattering by the system of Brownian particles has been carried out. Temporary fluctuations of field intensity have been found to save chaotic properties of driving particles. Empirical diagnostic links have been retrieved of the largest Lyapunov exponent of fluctuations of field intensity with parameters of the dispersive media.



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