

量子物理学・ナノサイエンス第 410 回セミナー

Hot Brownian Dynamics in Structured Optical Confinement

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概 要

Microscopic colloids are basic building blocks of soft and biological matter. They also serve as experimental test beds of Brownian dynamics. By illuminating light-absorbing colloids with a laser beam, one can observe the so-called 'hot-Brownian motion'. This out-of-equilibrium system can form unconventional assemblies and exhibit evolutionary dynamics that can emulate some natural systems. In this talk, I will show how structured optical potentials can influence the assembly, rotation, revolution and synchronization of hot Brownian colloids. I will conclude with a discussion on the interaction of optical vortices with hot Brownian colloids.

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