

Abstract Submitted  
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**Influence of hydrodynamic coupling on pair-diffusion in a quasi-one-dimensional colloid system**<sup>1</sup> BINHUA LIN, XINLIANG XU, STUART RICE, University of Chicago, HAIM DIAMANT, Tel Aviv University — The effect of hydrodynamic interaction on the separation dependence of the center of mass and relative pair diffusion coefficients of colloid particles in a quasi-one-dimensional system, including the influence of proximate walls, has been calculated using the method of reflections. There is excellent agreement between the theoretical predictions and the experimental data. We show that the separation dependence of the relative pair diffusion coefficient has oscillatory structure on the scale length of the correlation length in the system, and we directly relate that oscillatory structure to the pair correlation function of the system.

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