USING PATH INTEGRAL MONTE CARLO SIMULATIONS TO STUDY DELOCALIZATION OF DOPANT MOLECULES IN CLUSTERS OF HELIUM-4

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Path Integral Monte Carlo (PIMC) simulations are performed on several dopant molecules in clusters of ^{4}He. We investigate the molecular distributions in the cluster as a function of molecular mass and binding strength to helium, and compare our results with the predictions of simple particle-in-a-spherical-box calculations.