

Abstract Submitted
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Crystal Nucleation behavior near gas-liquid spinodal line LIMEI

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— The complex problem of crystal nucleation is currently at stage. Using molecular
dynamics simulations, we study the crystal nucleation behavior of colloids modeled
by hard-core particles with narrow square well attractive potential. For this system
the liquid gas critical point lies below the gas-crystal equilibrium line. We investi-
gate how the nucleation rate depends on the pressure and density, in particular in
the vicinity of the liquid-gas spinodal. We find that there is a correlation between
nucleation rate and spinodal line. We interpret our results using classical nucleation
theory.

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