Abstract
A two dimensional colloidal suspension subject to a periodic substrate evolves into a colloidal molecular crystal under situations of strong confinement. We focus on the long range orientational order thereby emerging in the ground state. We study by simulations the situations where in each trap lies a pair of identical colloids, or alternatively a pair of oppositely charged macroions. We consider square or triangular geometries for the periodic confinement, together with less symmetric distorted lattices.

Keywords
Colloidal molecular crystals, confined colloidal suspensions, orientational ordering, screened Coulomb interactions, simulated annealing.