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Aggregation of Thermal Particles in Simulation[1] IAT NENG CHAN, University of Macau — Based on the Schrodinger Equation, energy levels are evaluated for charged particle or atom surrounded by few atoms imitated to atomic cavity situations under multipole or Lennard-Jones interactions. To examine the states of corresponding eigenvalues, the associated wave functions from simulation are plotted in three-dimension to elucidate the space distribution of particles. In cases for testing on effect of different adjacent atomic structures, concentration region of distribution is revealed from a series of results. The range of localization shown also is affected by the type and strength of interactions between particles and atoms, besides the number and position of surrounding atoms. The thermal effect considered in the computation is modeled by average over results from random fluctuation of atom positions for a given heating grade. Moreover, analysis with fuzzy conditions is applied to reduce the complicated and time-consumption approach, also for the training in science education. Even the investigation is limited and tentative, qualitative studies on different parameters and structures can provide the influence of factors and approximate information to compare with the experience evidences.

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