Caption of movies for the JFM-20-S-1047.R5 manuscript entitled
'Fokker-Planck-Poisson kinetics:
Multi-phase flow beyond equilibrium'

Caption of movie 1

Formation and coalescence of nano droplets in spinodal decomposition using the DFP-SP model. The evolution of number density is shown for argon in the physical domain $\Omega_x = [0, L]^2 \times [0, 1]$ m^3, where $L = 5 \times 10^{-8}$ m, using $N_p = 1.33 \times 10^8$ particles. Initial temperature and number density are $T^{(0)} = 120$ K and $n^{(0)} = 3 \times 10^{27}$ m^{-3}, respectively.

Caption of movie 2

Formation and coalescence of nano droplets in spinodal decomposition using the DFP-SP model. The evolution of number density is shown for argon in the physical domain $\Omega_x = [0, L]^2 \times [0, 1]$ m^3 where $L = 5 \times 10^{-8}$ m, using $N_p = 1.25 \times 10^8$ particles. Initial temperature and number density are $T^{(0)} = 120$ K and $n^{(0)} = 5 \times 10^{27}$ m^{-3} respectively. Formation of droplets larger than Movie 1 can be observed here.

Caption of movie 3

Evolution of number density for spinodal decomposition of argon obtained from the DFP-SP model inside the domain $\Omega_x = [0, L]^2 \times [0, 1]$ m^3 where $L = 5 \times 10^{-8}$ m with initial temperature and number density $T^{(0)} = 120$ K and $n^{(0)} = 8 \times 10^{27}$ m^{-3} respectively, using $N_p = 1.33 \times 10^8$ particles. Formation of bubbles is obtained.

Caption of movie 4

Three dimensional spinodal decomposition using the DFP-SP model. Evolution of number density of argon in the physical domain $\Omega_x = [0, L]^3$ m^3 where $L = 5 \times 10^{-8}$ m is obtained. Initial temperature $T^{(0)} = 120$ K, initial number density $n^{(0)} = 8 \times 10^{27}$ m^{-3} and number of particles $N_p = 4.32 \times 10^8$ are employed.