

Description of Additional Supplementary Files

File Name: Supplementary Data 1

Description: GROMACS Configuration file of bulk ice with a random hydrogen network satisfying the ice rules.

File Name: Supplementary Movie 1

Description: Dynamics of a terrace in the activated growth region. Movie corresponding to Fig. 4 (a-e).

File Name: Supplementary Movie 2

Description: Dynamics of a liquid droplet quenched below the kinetic liquid-vapor coexistence line. Movie corresponding to Fig. 4 (f-j).

File Name: Supplementary Movie 3

Description: Growth of a liquid droplet above the kinetic liquid-vapor coexistence line. Movie corresponding to Fig. 5 (a-e).

File Name: Supplementary Movie 4

Description: Dynamics of a liquid droplet above the α to β transition line. Movie corresponding to Fig. 5 (f-j).

File Name: Supplementary Movie 5

Description: Dynamics of a liquid droplet above the kinetic liquid-vapor coexistence line. Movie corresponding to Supplementary Figure 2.

File Name: Supplementary Movie 6

Description: Dynamics of a liquid droplet past the kinetic spinodal line. Movie corresponding to Supplementary Figure 3.