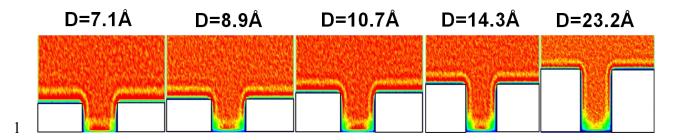
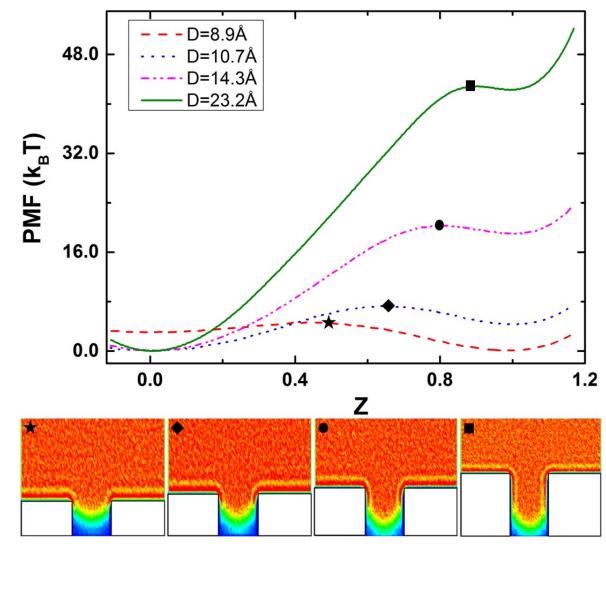
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2 Fig. S1 Fully wet (WZ) states of single-scale grooves. The water density profiles in the WZ

- 3 states are drawn as color maps for various groove depths, *Ds*.
- 4



4 Fig. S2 Free energy profiles for the wetting transitions of non-hierarchical grooves with various
5 depths, *Ds.* PMF is plotted vs. the filling level *Z* for *Ds* of 8.9, 10.7, 14.3, and 23.2 Å. Drawn in
6 the bottom are the water density profiles at the transition states marked with the symbols in the
7 PMF curves.

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