

PROCEEDINGS

Wetting and Capillary Condensation on the Nanoscale

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ABSTRACT

Wetting and capillary phenomena on the macroscale are ubiquitous and have been well understood. However, the relevant physics and mechanics on the nano-scale still remain mysterious. In this talk, I would like to discuss the exploration of capillarity from a nanoscopic perspective, including wetting, evaporation and condensation. At the solid/liquid interface, the liquid exhibits a pronounced layered structure that extends over several intermolecular distances from the solid surface. Our recent studies have shown that such molecular detail could provide some new understanding on century-old classical theory in this field, such as Young's equation [1] and Kelvin equation [2].

KEYWORDS

Wetting; capillary condensation; solid/liquid interfaces; evaporation

Acknowledgement: The numerical calculations were performed on the supercomputing system in Hefei Advanced Computing Center and the Supercomputing Center of University of Science and Technology of China.

Funding Statement: This work was financially supported by the National Natural Science Foundation of China (Grant No.: 11922213, URL: <https://www.nsf.gov.cn/>) and the Youth Innovation Promotion Association CAS (Grant No.: 2020449, URL: <http://www.yicas.cn/>).

Conflicts of Interest: The authors declare that they have no conflicts of interest to report regarding the present study.

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