Electronic Supporting Information

Preparation of lotus-like hierarchical microstructures on zinc substrate and its wettability study

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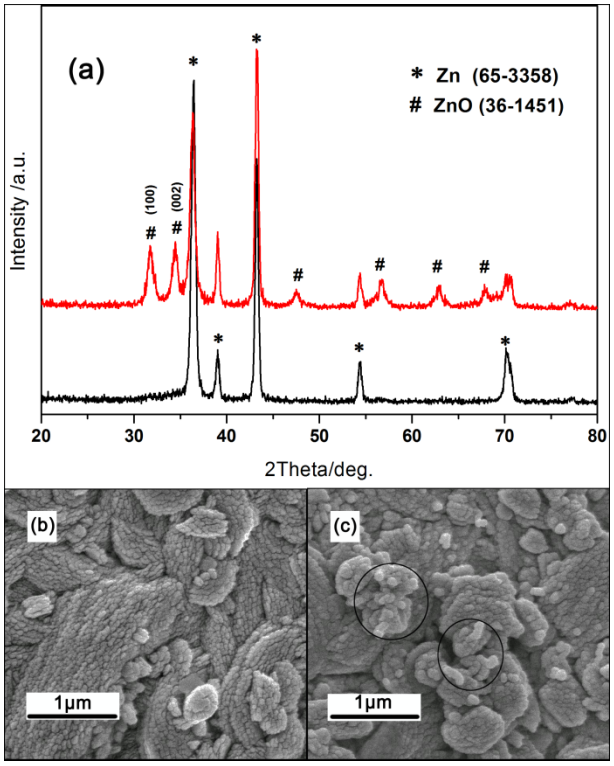

Fig.S1 The XRD patterns and SEM image of sputtered Zn layer and Zn/ZnO

composite structure after water bath process. (a) XRD pattern for Zn film (black line) and Zn/ZnO film resulted from water bath (red line). (b) the microstructure of sputtered Zn film, and (c) the ZnO nanorods structure.

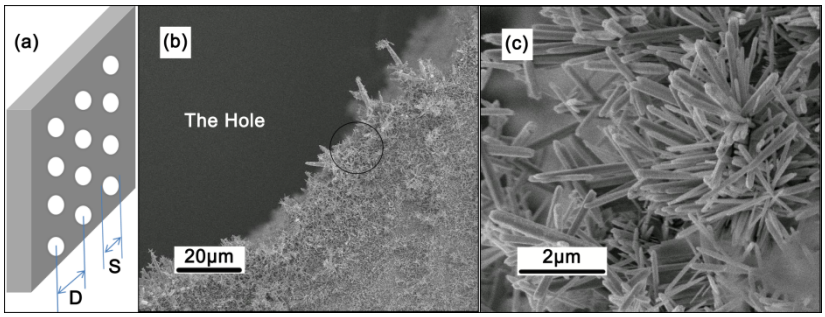

Fig.S2 The Zn/ZnO morphology on the Zn drilled holes treated by acid etch and water bath. (a) The macro diagram, (b) the low magnification SEM image, and (c) the ZnO microstructure in a higher magnification.

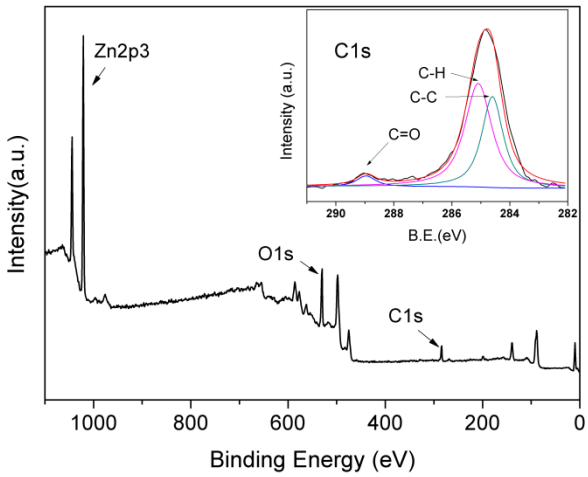

Fig.S3 The XPS image for superhydrophobic sample after heating in 185°C atmosphere for 4 h. The inset is the splitting peaks of O1s peak.

Movie S1 A video for superoleophilicity of the drilled Zn sheet with Zn/ZnO microstructure.

Movie S2 A video for superhydrophobicity of the drilled Zn sheet with Zn/ZnO microstructure.

Movie S3 A video for n-hexane/water separation experiment on the drilled Zn sheet with Zn/ZnO microstructure.