

Supporting Information

A Robust Superhydrophobic PDMS@ZnSn(OH)₆ Coating with Under-Oil Self-Cleaning and Flame Retardancy

Mengying Long, Shan Peng*, Wanshun Deng, Xinrui Miao, Ni Wen, Qiannan Zhou,
Xiaojun Yang, Wenli Deng*

*College of Materials Science and Engineering, South China University of Technology,
Wushan Road, Tianhe District, Guangzhou 510640, PR China*

E-mail: pengshan5213@163.com.

E-mail: wldeng@scut.edu.cn. Tel.: (+86)020-22236708.

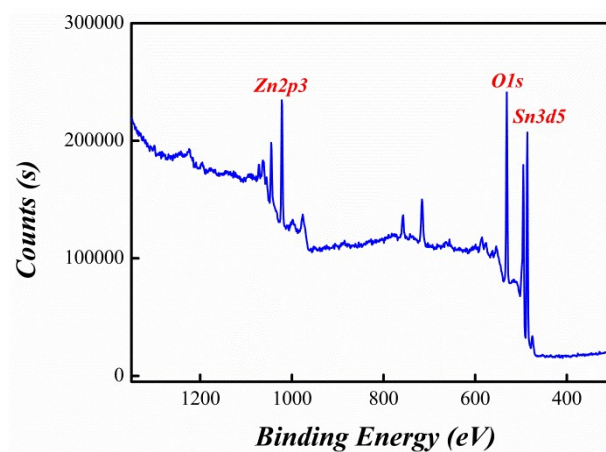


Figure S1. XPS spectrum of the original ZHS particles.

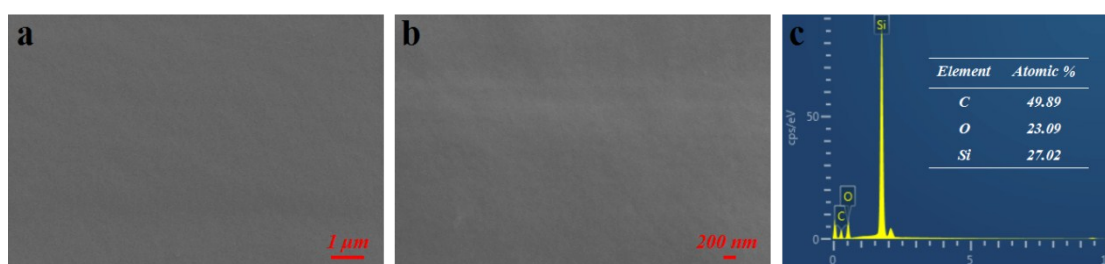


Figure S2. PDMS covers on glass substrate. (a, b) The low-, high-magnification SEM images and (c) EDS spectrum of the PDMS coated glass surface.

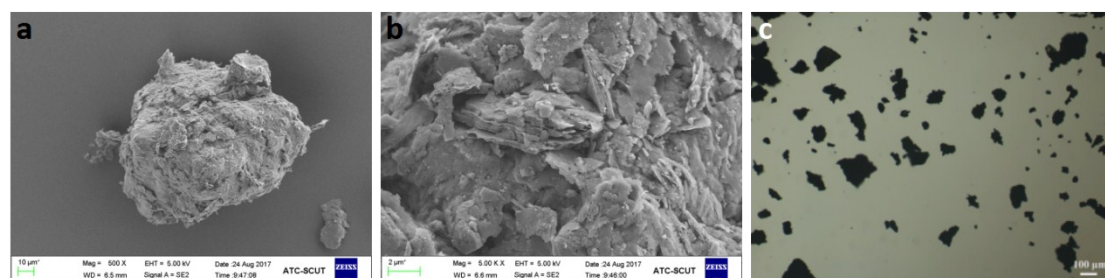


Figure S3. (a) Low- and (b) high-magnification SEM images of the dust. (c) The dust observed under the polarizing microscope.

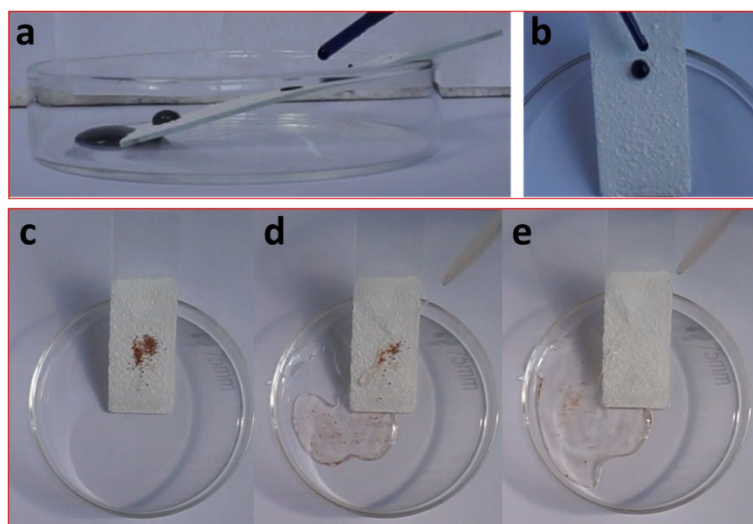


Figure S4. (a) Top- and (b) side-view of the water droplets on the PDMS@ZHS coated glass surface contaminated by dodecane. (c–e) Self-cleaning tests on the dodecane contaminated surface.

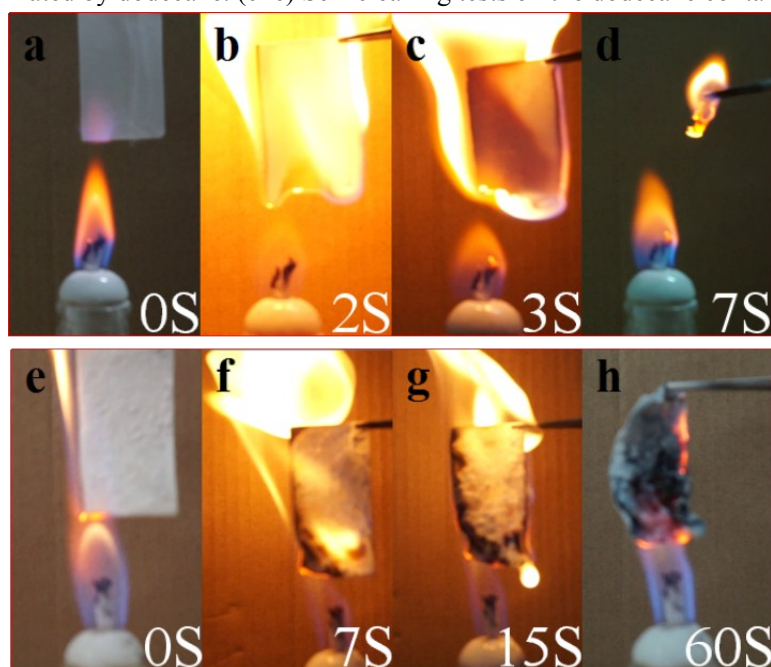


Figure S5. Combustion behaviors of PDMS@ZHS coated on paper after immersion in hexadecane. The combustion procedures of the (a) uncoated, and (b) the PDMS@ZHS coated paper after being immersed into hexadecane.

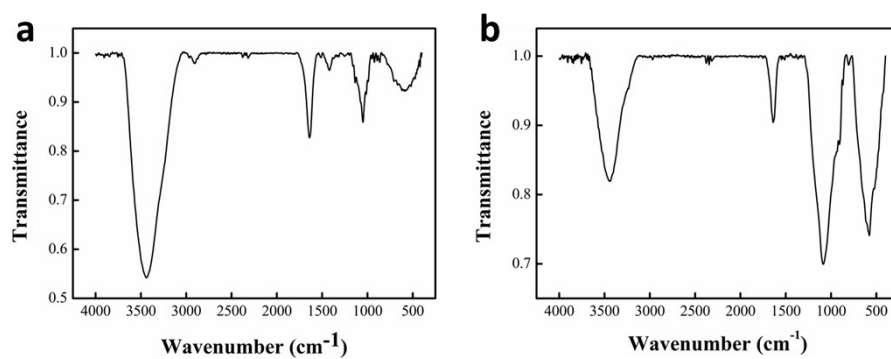


Figure S6. FT-IR spectrums of the burned (a) uncoated paper and (b) PDMS@ZHS coated paper.

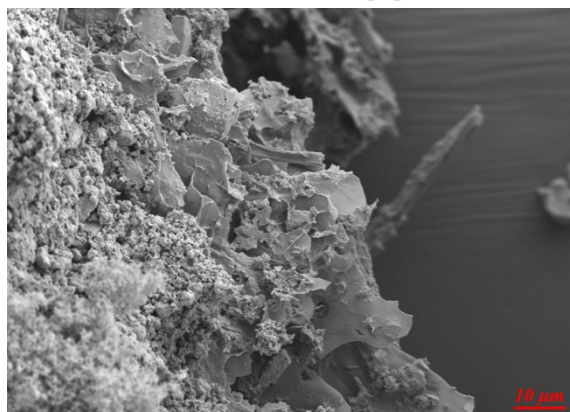


Figure S7. SEM image of the residue after the vertical test.