

Supporting Information

UV-driven self-replenishing liquid infused surface with promising anti-algae adhesion performance

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Table S1. Surface atomic composition of VO, MEMG@ED, SMEMG and R-SMEMG from XPS elemental analysis.

Sample	C (%)	O (%)	N (%)
VO	88.77	10.84	0.4
MEMG@ED	74.77	24.05	1.18
SMEMG	80.04	18.97	0.99
R-SMEMG	79.44	19.53	1.03

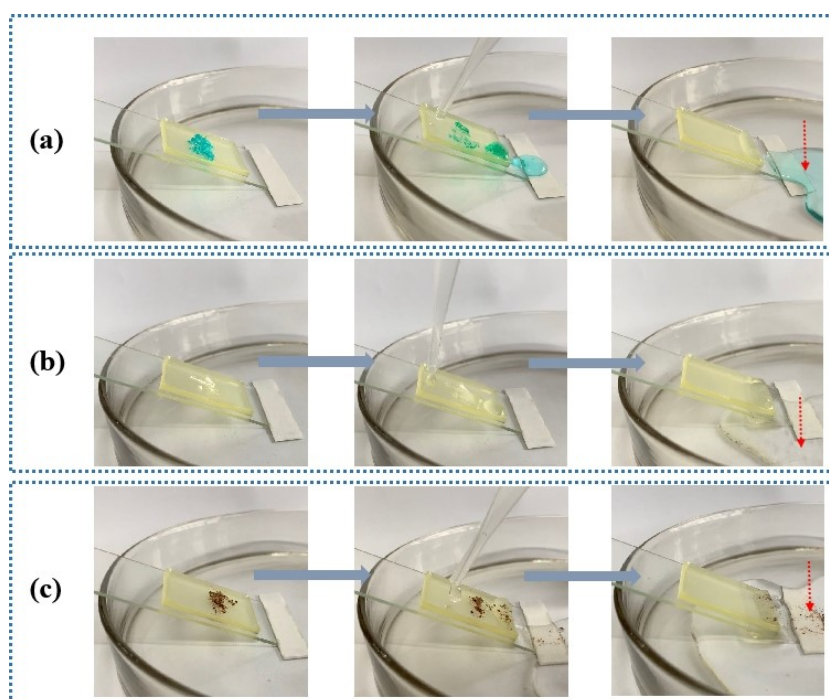


Figure S1. Self-cleaning test on SMEMG by employing $\text{CuCl}_2 \cdot 2\text{H}_2\text{O}$ particles (a), SiO_2 powders (b) and sandy soil (c) as the model contaminants.

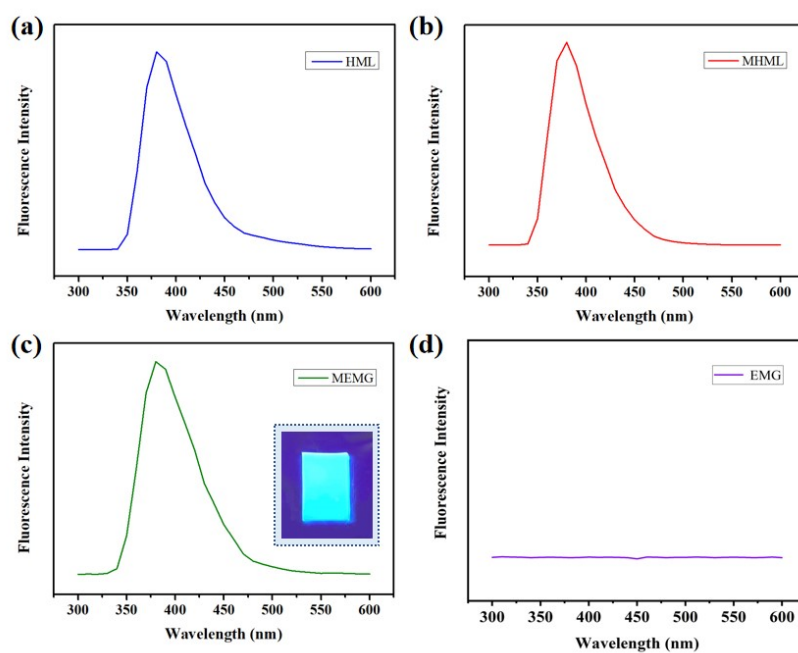


Figure S2. The fluorescence spectra of HML (a), MHML (b), MEMG (c) and EMG (d); the insert is the digital photographs of SMEMG under UV light irradiation with wavelength of 365 nm.

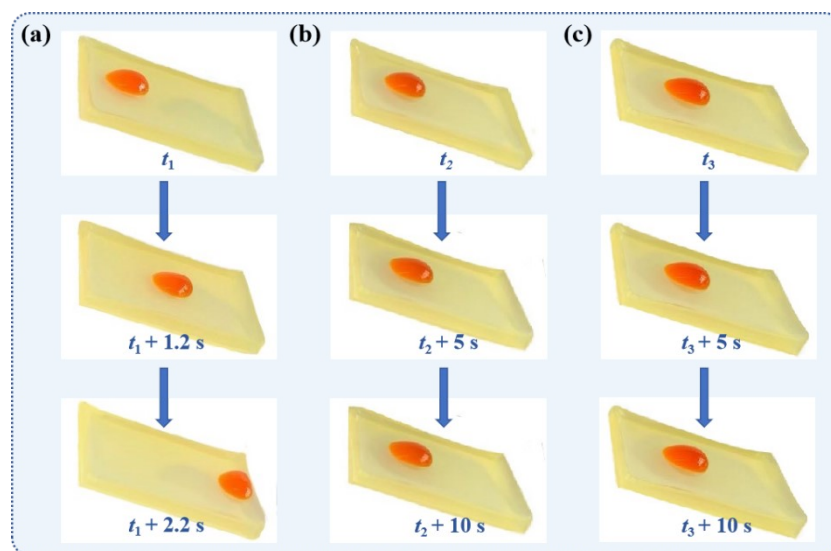


Figure S3. Dynamic control of water droplet (20 μ L) mobility on SEMG. (a) Process of water droplet slipping off SEMG at initial state; (b) process of water droplet pinned on SEMG after the surface lubricant oil is swabbed; (c) process of water droplet still stuck on SEMG after UV irradiation for 8 h.