

## Electronic Supplementary Information

### TEMPO-mediated oxidized winter melon-based carbonaceous aerogel as an ultralight 3D support for enhanced photodegradation capacities of organic pollutants

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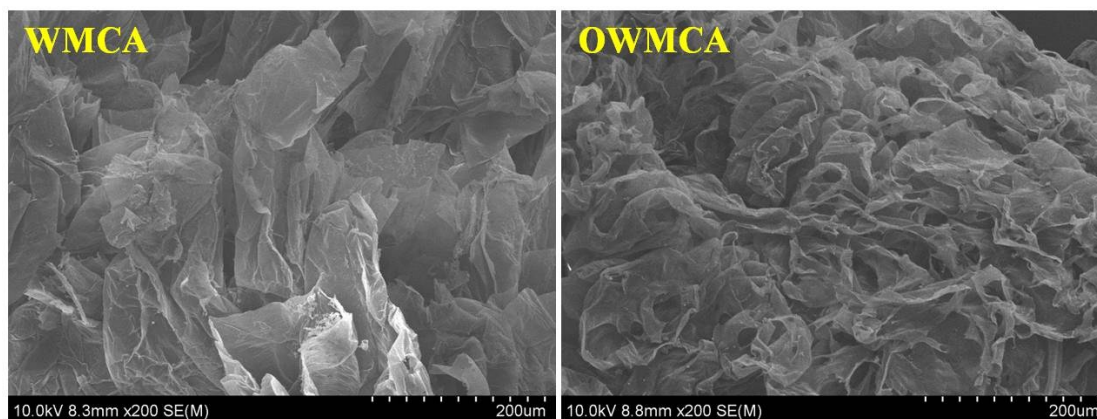
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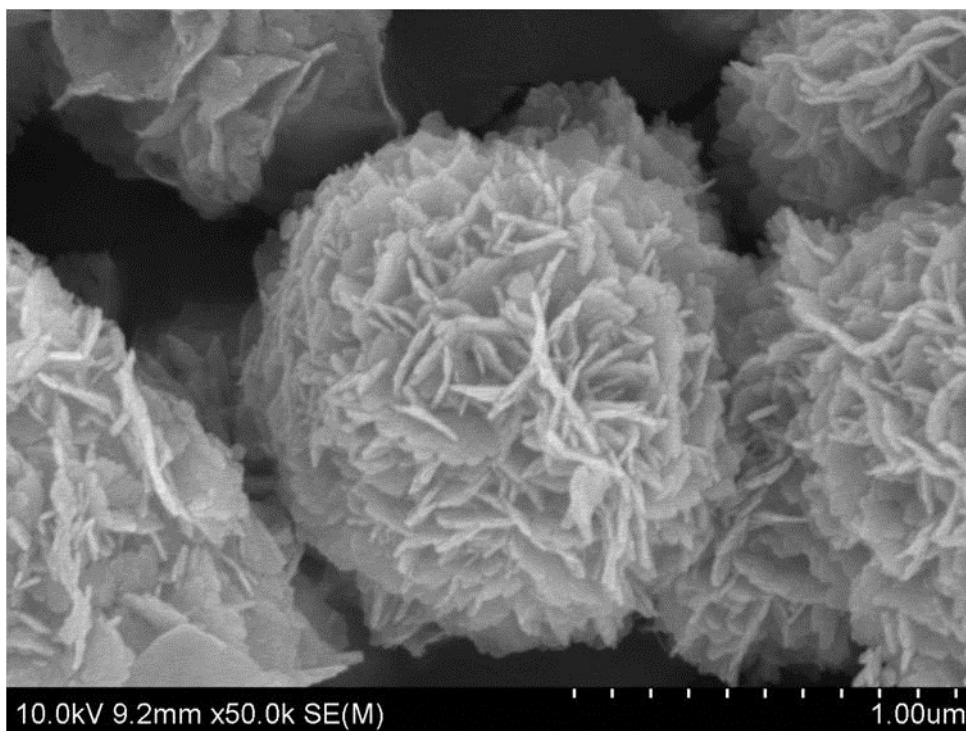
**Figure S1** SEM images of WMCA and OWMCA.



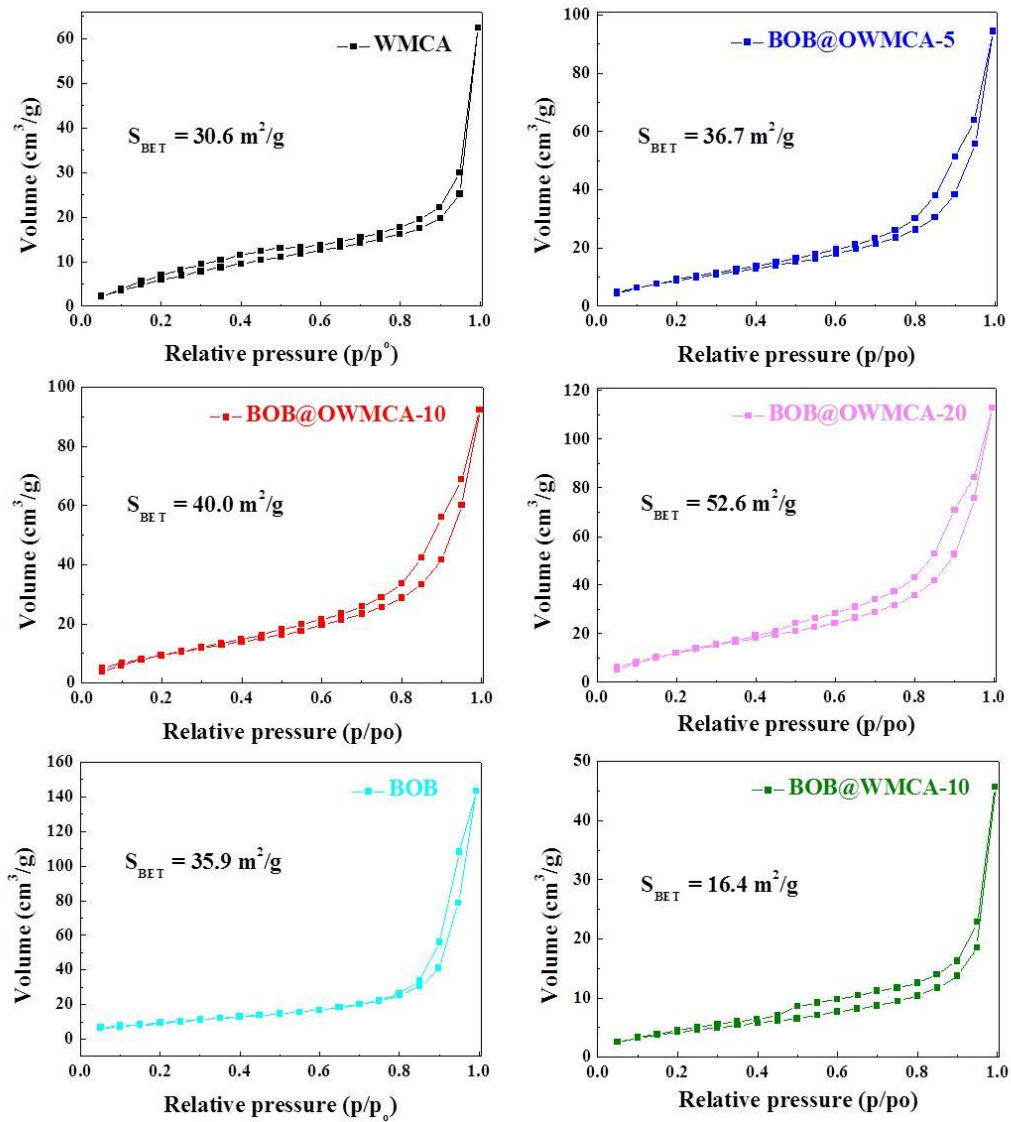
**Figure S2** Photograph of the as-prepared OWMCA monoliths with different volumes.



**Figure S3** Photographs of the BOB@OWMCA monolith standing on the feathers



**Figure S4** SEM image of flower-like BiOBr microspheres on the surface of OWMCA.



**Figure S5** Nitrogen adsorption-desorption isotherm of BOB@OWMCA composites with different ratios.