

Supporting Information

Conducting and Superhydrophobic Hybrid 2D Material from Coronene and Pyrene

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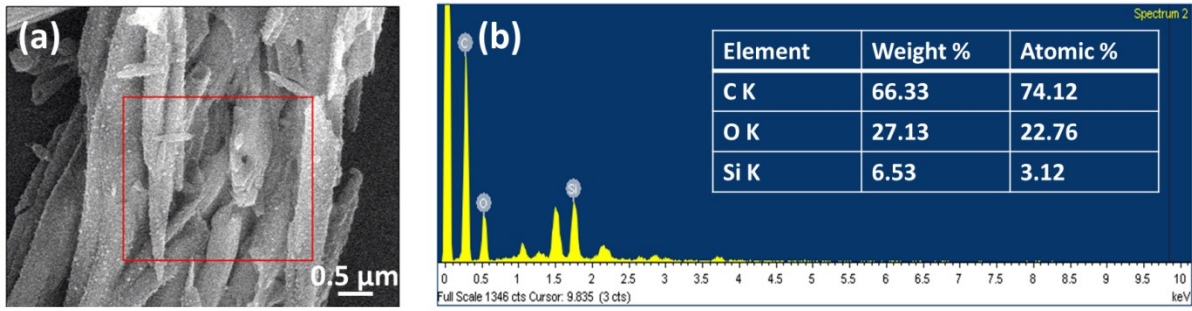


Figure S1. (a) SEM image used for energy dispersive X-ray spectrometry (EDS) and (b) EDS of bulk COPy (Substrate used for analysis: Silicon wafer)

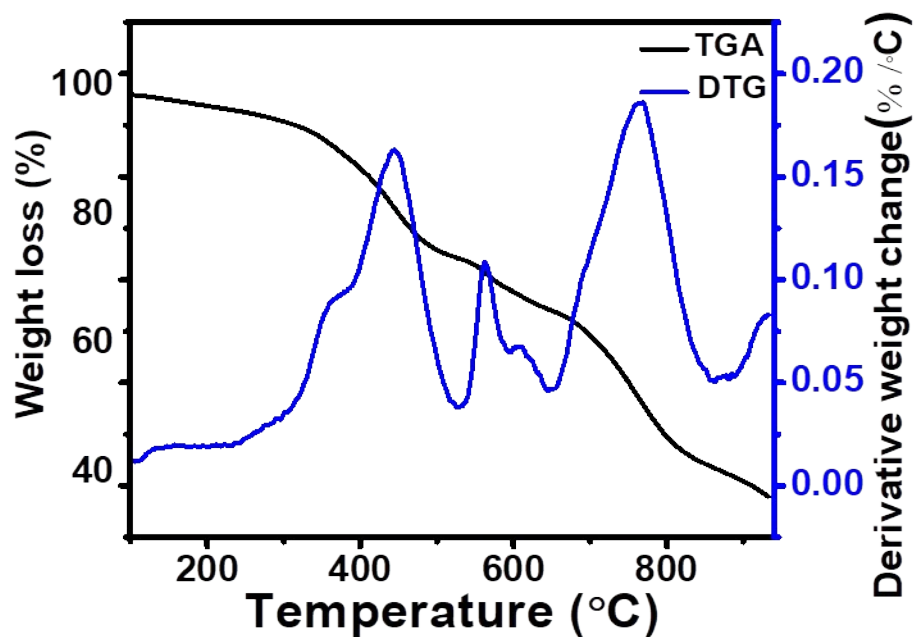


Figure S2. Thermogravimetric analysis (TGA) depicting the thermal stability of bulk COPY powder

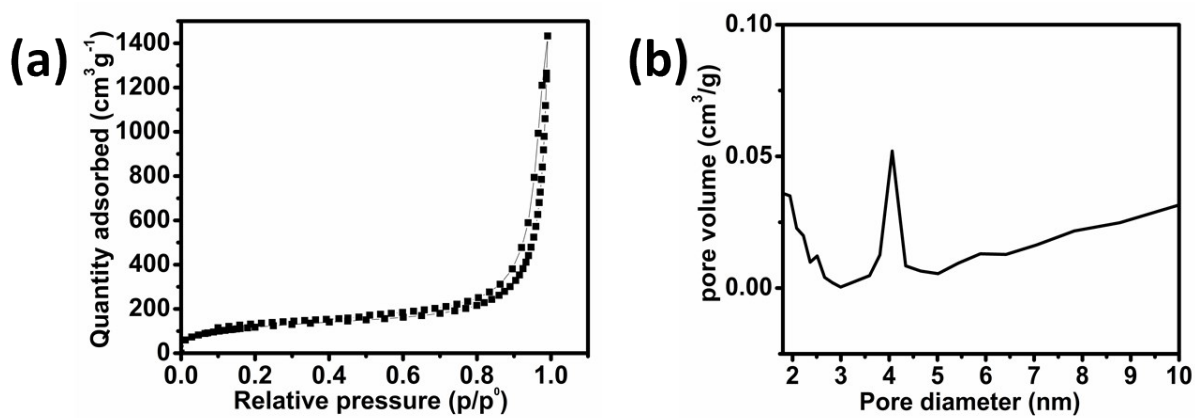


Figure S3. (a) Nitrogen adsorption-desorption isotherm and (b) pore size distribution of COPY

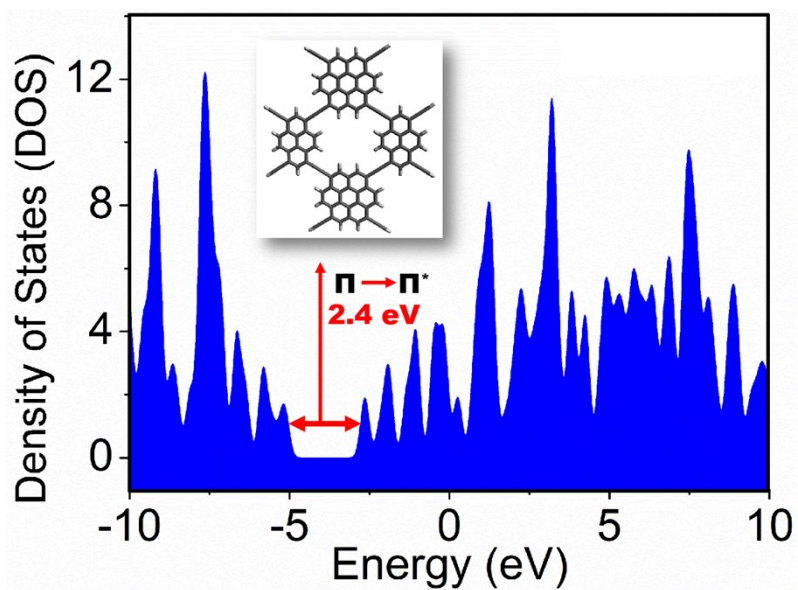


Figure S4. Density of states (DOS) for optimized geometry of the COPY1 (with lesser conjugation)

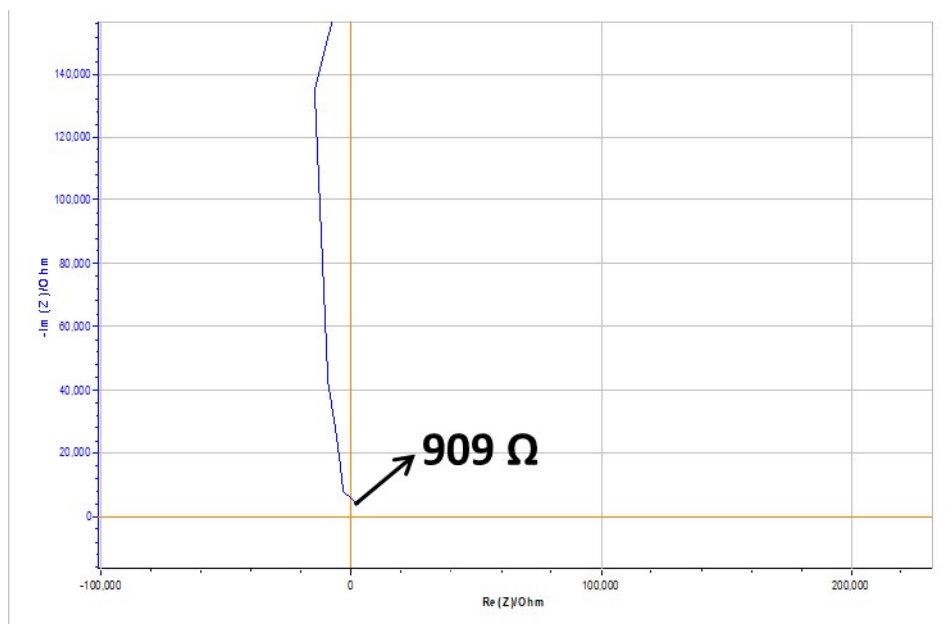


Figure S5. Impedance spectrum of bulk COPY powder with an X intercept of 909 Ω

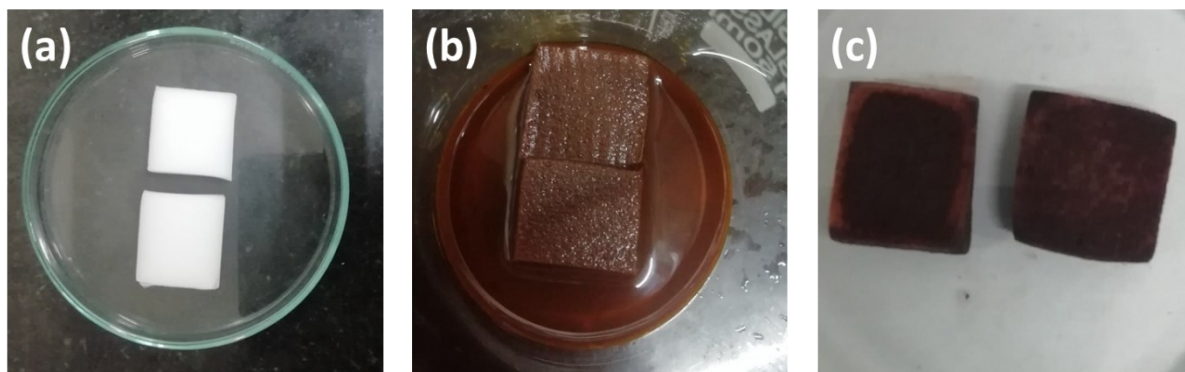


Figure S6. Photographs of (a) pristine (b) TEP coated and (c) COPY incorporated melamine sponges



Figure S7. Photograph of COPY incorporated melamine sponge (above) floating on water and pristine melamine sponge (below) immersed in water

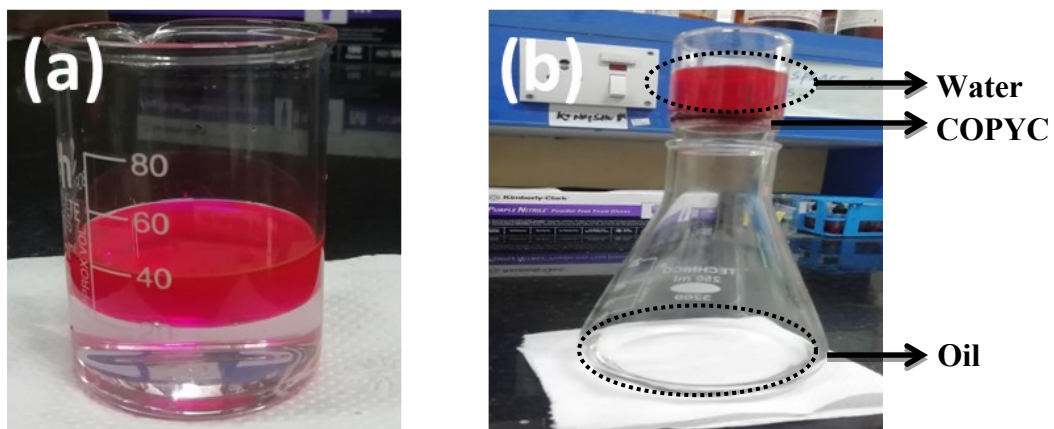


Figure S8. Photograph of (a) oil-water mixture (DCM as the representative of heavy oils) (rhodamine B was used as dye for water for better visual appeal) and (b) oil-water separation via COPYC fixed between glasswares (brown layer)

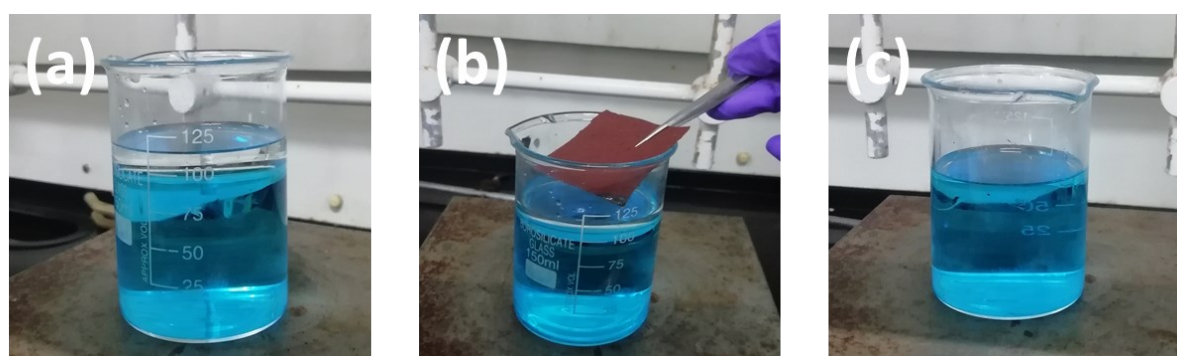


Figure S9. Photograph of (a) paraffin oil-water mixture (top layer- paraffin oil and bottom layer- water (methylene blue as dye for better visual appeal) (b) COPYC inserted into oil-water mixture and (c) the layer of water after the removal of paraffin oil