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Supporting information

Large-Area Patterned 2D Conjugated Microporous Polymers *via* Photomask-Assisted Solid-State Photopolymerization

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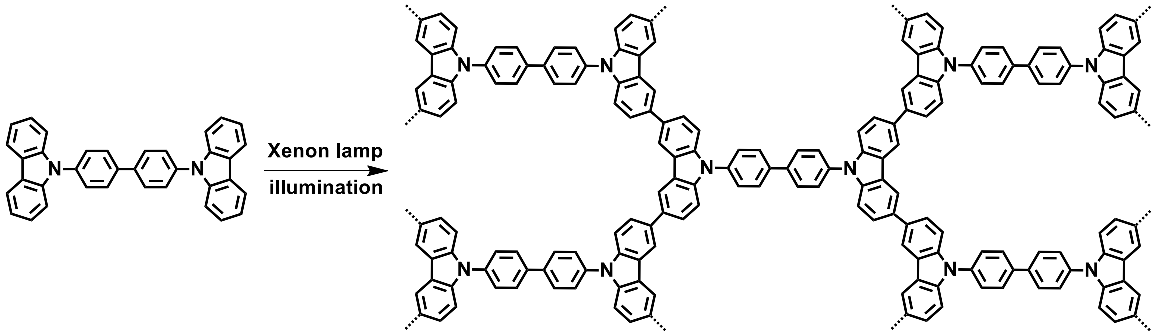
Scheme S1. Synthesis of 2D CMP.



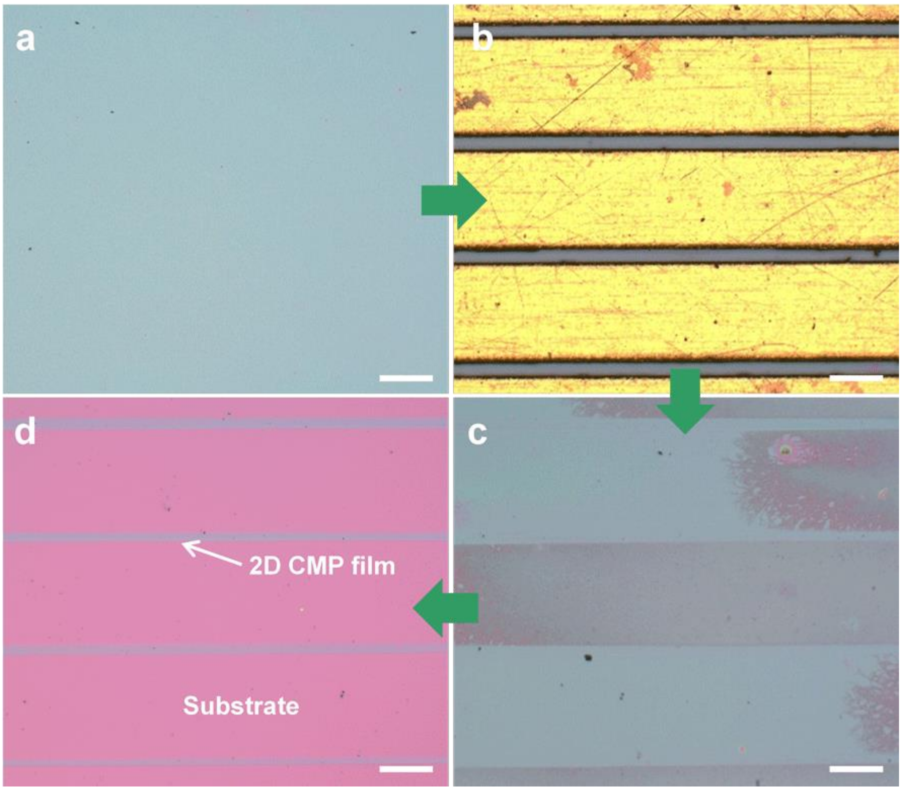


Figure S1. Optical micrographs of the preparation processes of patterned 2D CMP film. (a) Monomer was spin-coated onto a SiO2/Si substrate. (b) The monomer film was covered with a photomask. (c) The monomer film was irradiated with a xenon lamp and the photomask was removed away. (d) The patterned 2D CMP films. Scale bar: 200 μm.

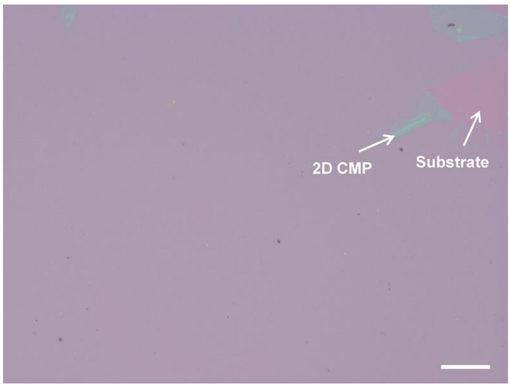


Figure S2. Optical micrographs of large-area 2D CMP film on SiO2/Si substrate. Scale bar: 50 µm.

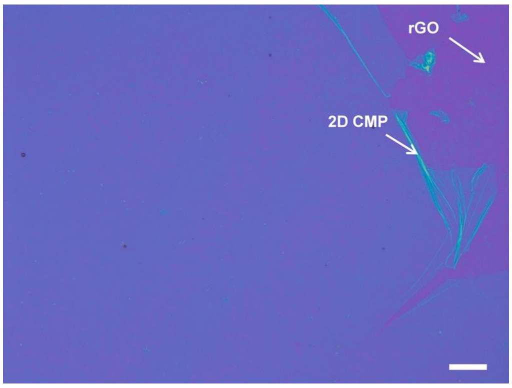


Figure S3. Optical micrograph of large-area 2D CMP/rGO heterostructure film. Scale bare: 50 µm.

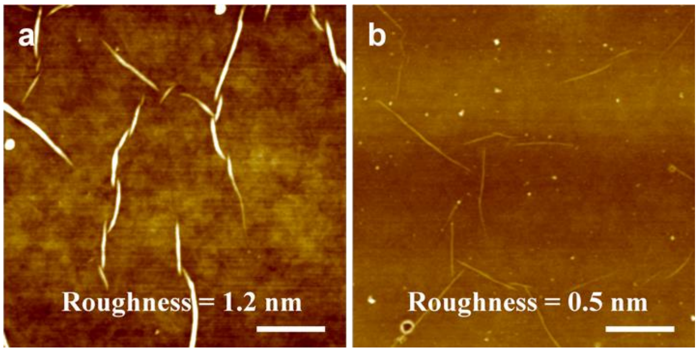


Figure S4. AFM image of (a) rGO and (b) 2D CMP/rGO heterostructure. Scale bare: 1 µm.

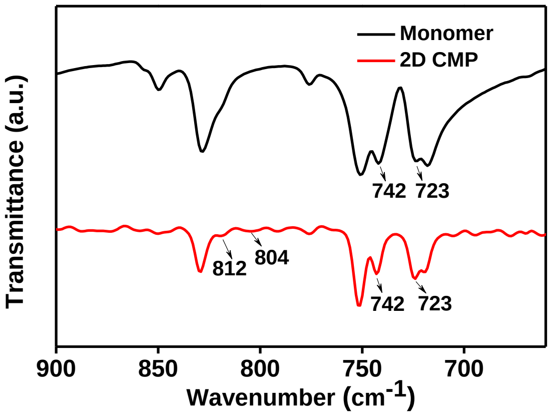


Figure S5. FTIR spectra of the monomer and 2D CMP materials.

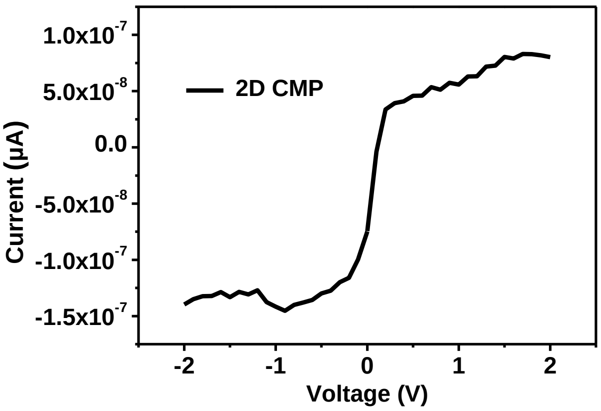


Figure S6. Typical I–V characteristics of the device Au/2D CMP/Au.