Supporting Information

Layer-by-layer Assembly of Porphyrin-Based Metal-Organic Frameworks on Solids Decorated with Graphene Oxide

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S1 AFM study of the control GO film transferred from the air/hydrosol interface

S2 Specroscopy data

S3 X-ray data

S4 Morphological studies

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S1 AFM study of the control GO film transferred from the air/hydrosol interface

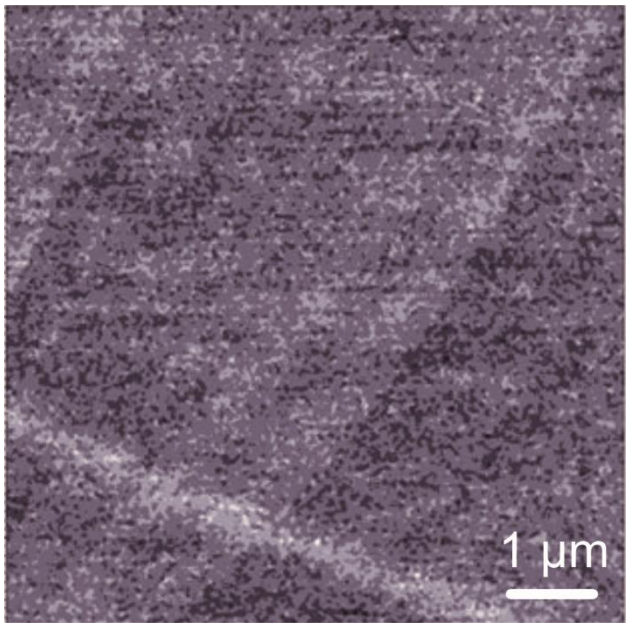

Figure S1. AFM image of the surface of freshly cleaved mica scanned after the immersion into the GO aqueous dispersion. No GO particles on the surface of the support were found.

S2 Specroscopy data

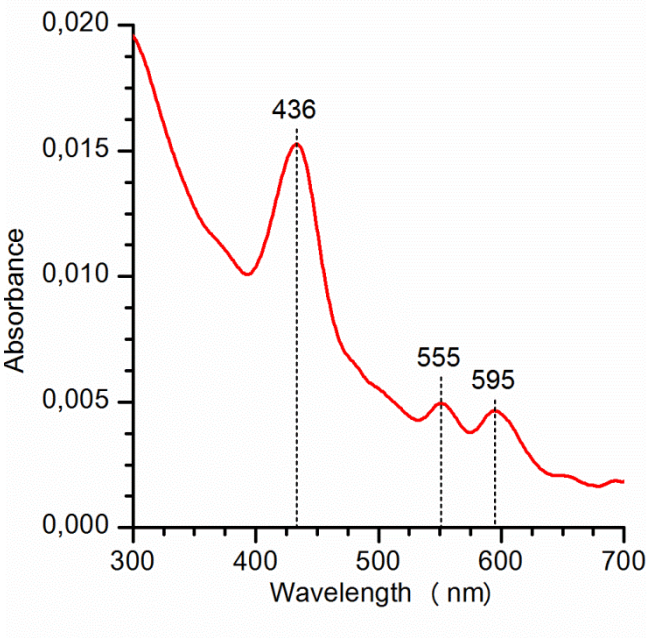

Figure S2. UV-vis spectrum of ZnTCPP layer deposited onto the GO-modified quartz glass.

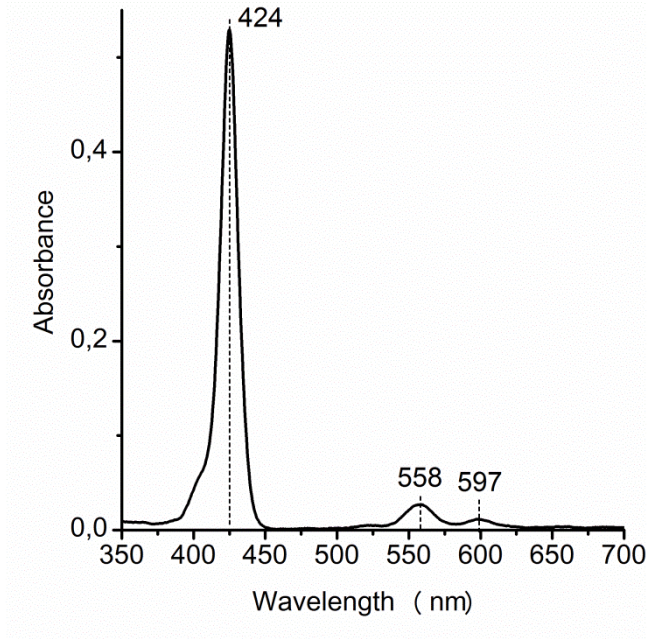

Figure S3. UV-vis spectrum of $8 \cdot 10^{-6}$ M ZnTCPP solution in chloroform measured in 2 mm quartz cuvette.

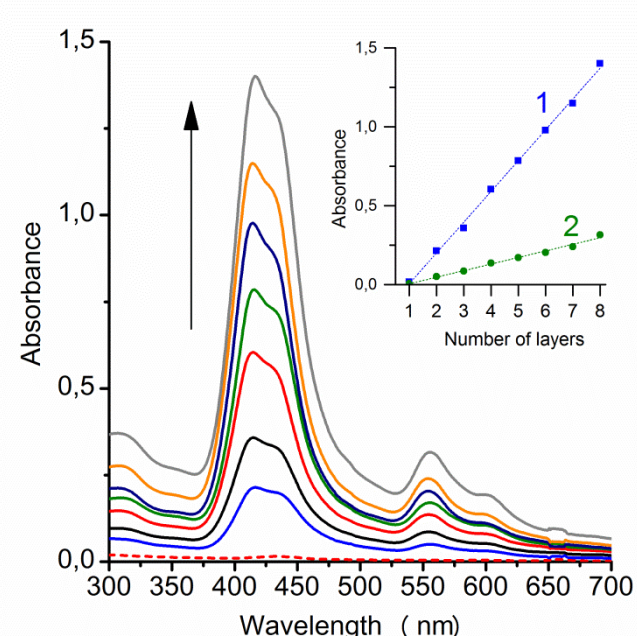

Figure S4. UV-vis spectra of SURMOF deposited onto the GO-modified quartz glass. The spectra were measured after deposition of every layer of ZnTCPP. The absorbance of SURMOF increased with a number of layers. Insert: UV−vis absorption intensity of the Soret band at 419 nm (*1*) and Q1-band at 557 nm (*2*) as a number of deposited layers.

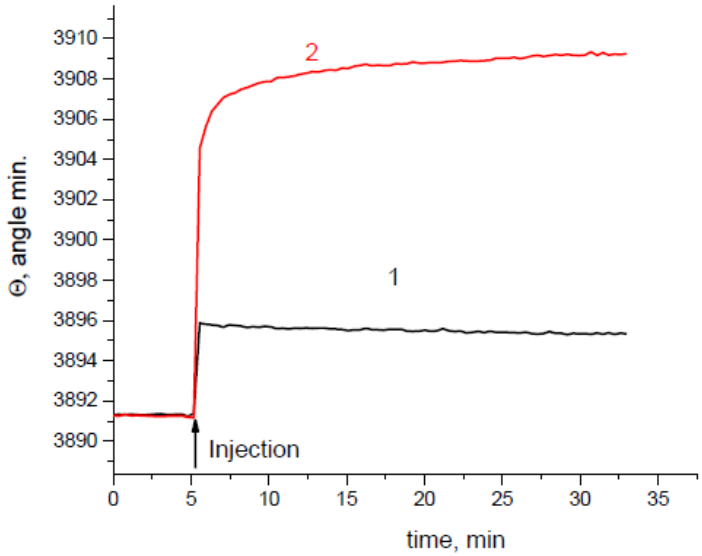

Figure S5. Full-recorded SPR sensograms for (1) 6-cycle SURMOF and (2) control film of ZnTCPP in 0.1 M solution of zinc acetate.

S3 X-ray data

S3.1 X-ray diffraction of starting components

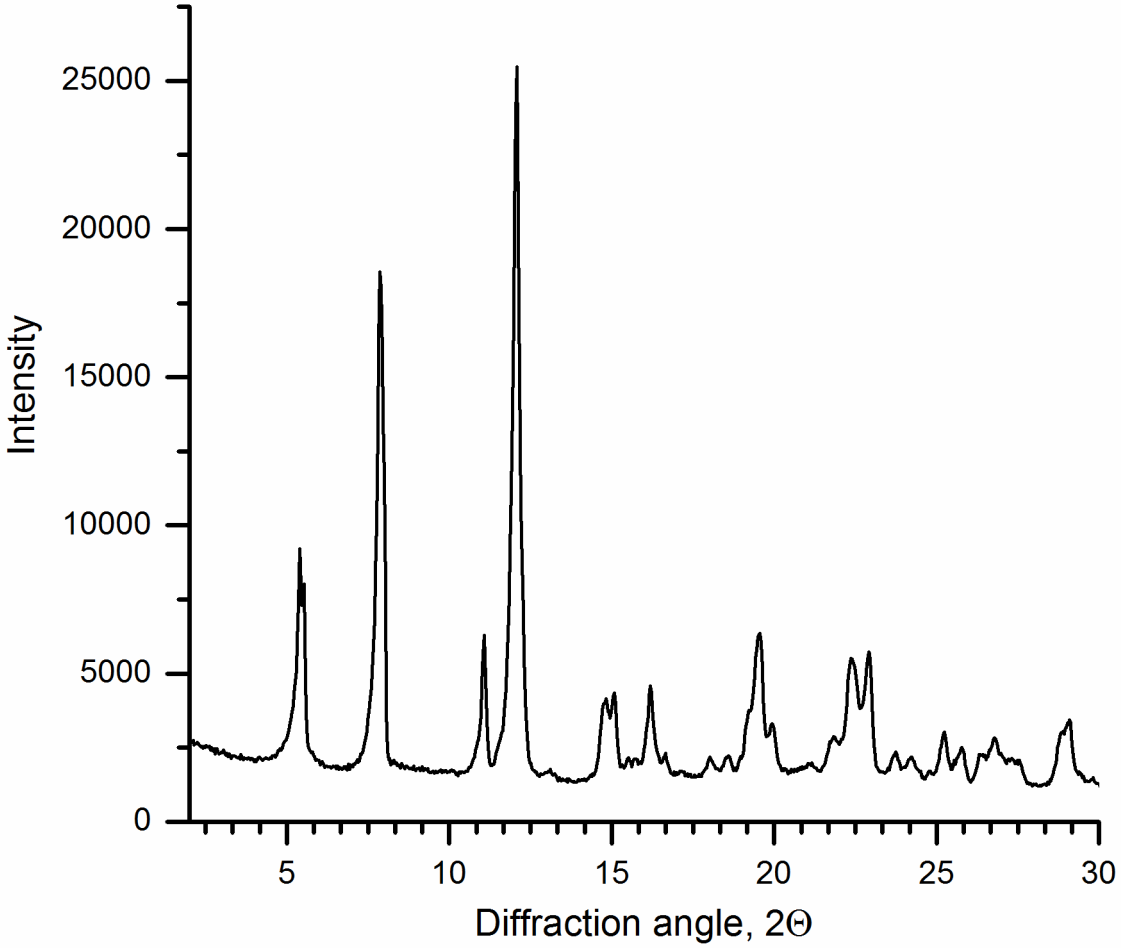

Figure S6. XRD for ZnTCPP.

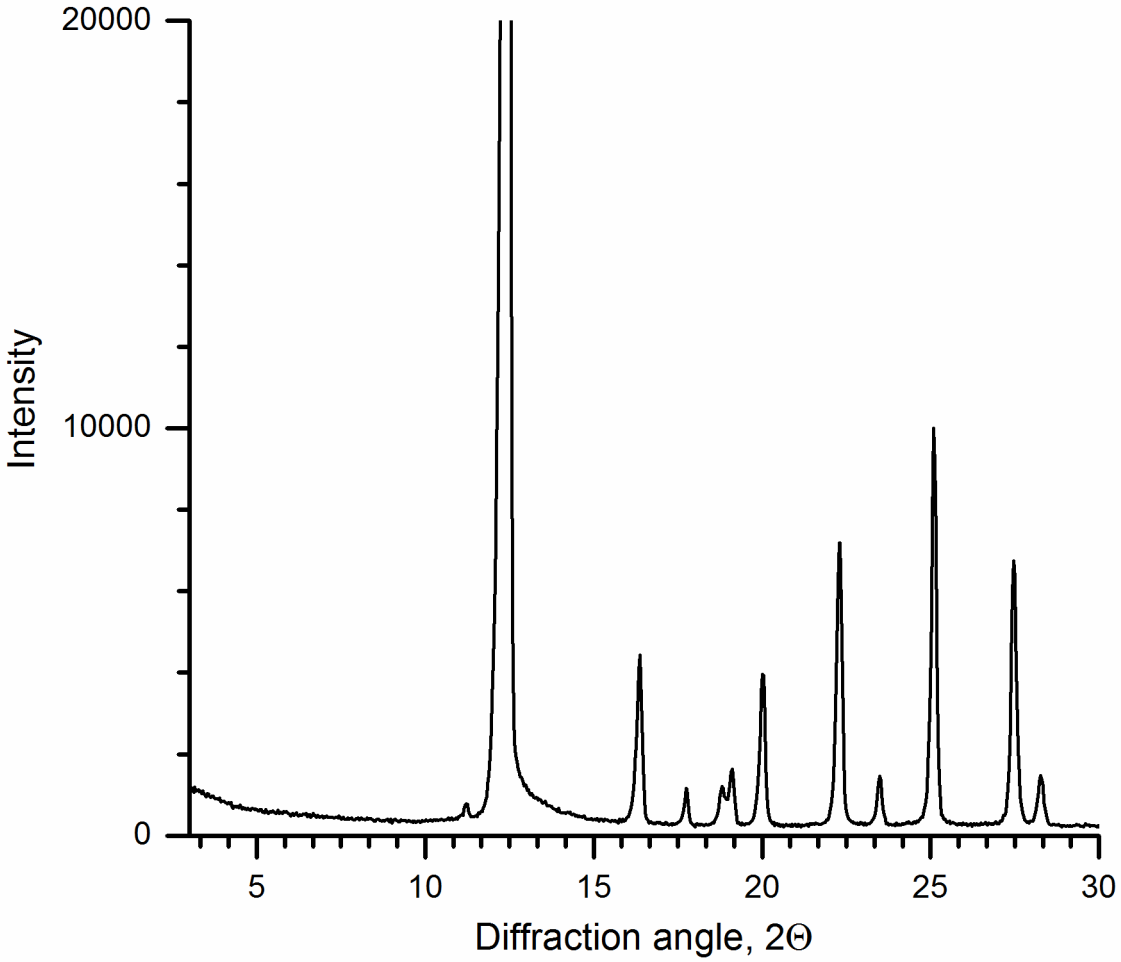

Figure S7. XRD for zinc acetate dihydrate.

S3.2 Structures of MOF comprising ZnTCPP from Cambridge Crystallographic Data Centre (CCDC)

1. catena-((□8-5,10,15,20-tetrakis(4-carboxylatophenyl)porphyrinato)-triaqua-tri-zinc; unknown solvate), CCDC refcode WOPRUQ[1];
2. (5,10,15,20-tetrakis(4-carboxyphenyl)porphyrinato)-bis(ethanol)-zinc, CCDC refcode JUXHUH[2];
3. catena-((□5-5,10,15,20-tetrakis(4-carboxyphenyl)porphyrinato)-tetra-aqua-pyridine-tri-zinc pyridine solvate dihydrate), CCDC refcode EBAQOO[3];

4. catena-((□9-5,10,15,20-tetrakis(4-carboxyphenyl)porphyrinato)-triaqua-tri-zinc N,N-diethylformamide solvate), CCDC refcode VUHJEO[4];
5. catena-((□5-tetra(4-carboxyphenyl)porphyrin)-(ethylene glycol-O)-di-zinc ethylene glycol solvate), CCDC refcode WAWGOQ[5].

S4 Morphological studies

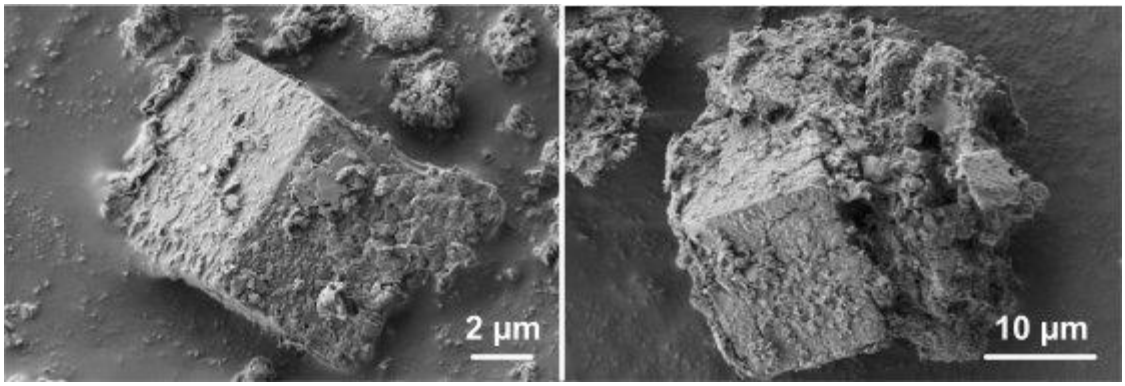

Figure S8. SEM image of ZnTCPP/$ZnAc_2$ powder immobilized on the surface of graphite tape. The material was synthesized in methanol according to the procedure described in [4].

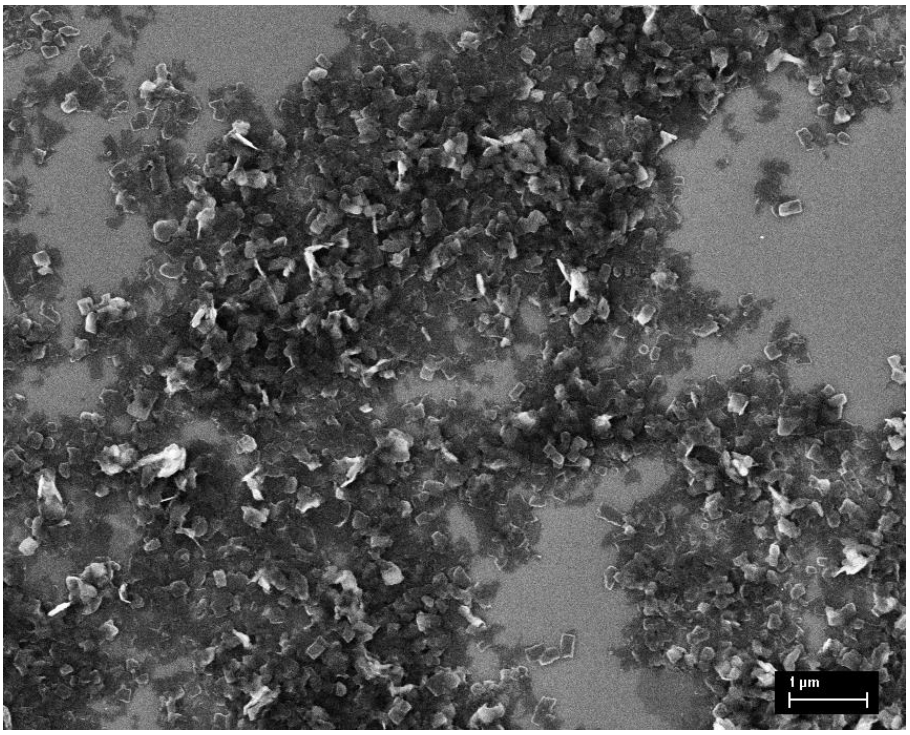

Figure S9. SEM image for the ZnTCPP/$ZnAc_2$/GO surface coating obtained under solvothermal conditions.

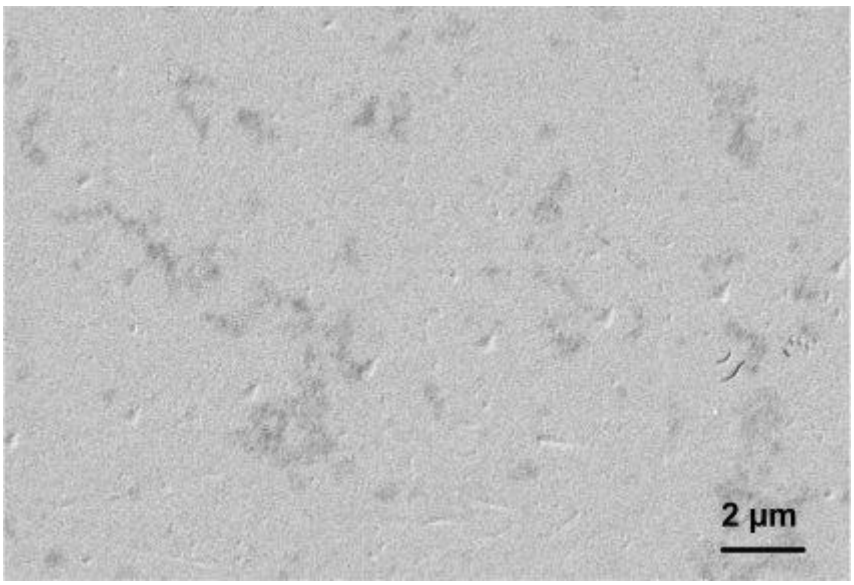

Figure S10. SEM image of the control film obtained through sequential L-b-L deposition of ZnTCPP and $ZnAc_2$ onto the quartz glass without GO.

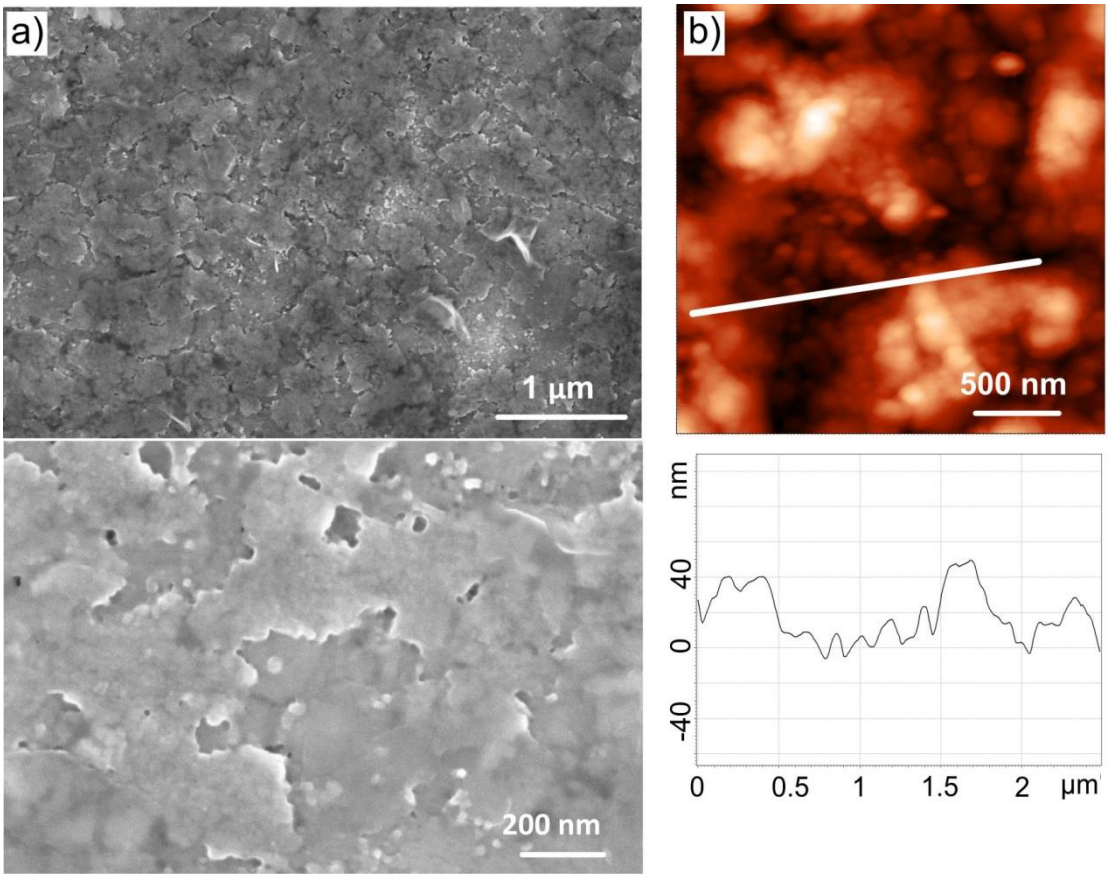

Figure S11. a) SEM and (b-c) ACM images and corresponding surface profiles for 20-layer ZnTCPP/$ZnAc_2$/GO SURMOF film.

S5 References

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