Supporting Information

Three-Component Covalent Organic Framework Nanosheets for the Detection of MicroRNAs

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Table S1. Synthetic oligonucleotides used in this study.

Name	Sequence
Probe DNA (PDNA)	5’-AACTATACAACCTACTACCTCA-3’
let-7a	5’-UGAGGUAGUAGGUUGUAUAGUU-3’
let-7c	5’-UGAGGUAGUAGGUUGUAUGGUU-3’
let-7b	5’-UGAGGUAGUAGGUUGUGUGGUU-3’
miR221	5’-AGCUACAUUGUCUGCUGGGUUUC-3’

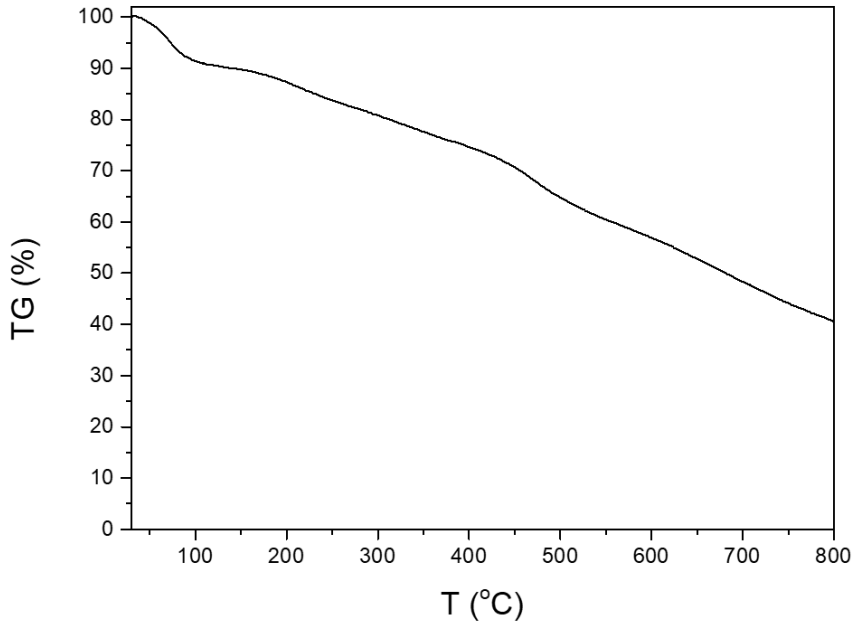


Figure S1. TGA curve of EB-TAPB-TFP COF under nitrogen atmosphere.

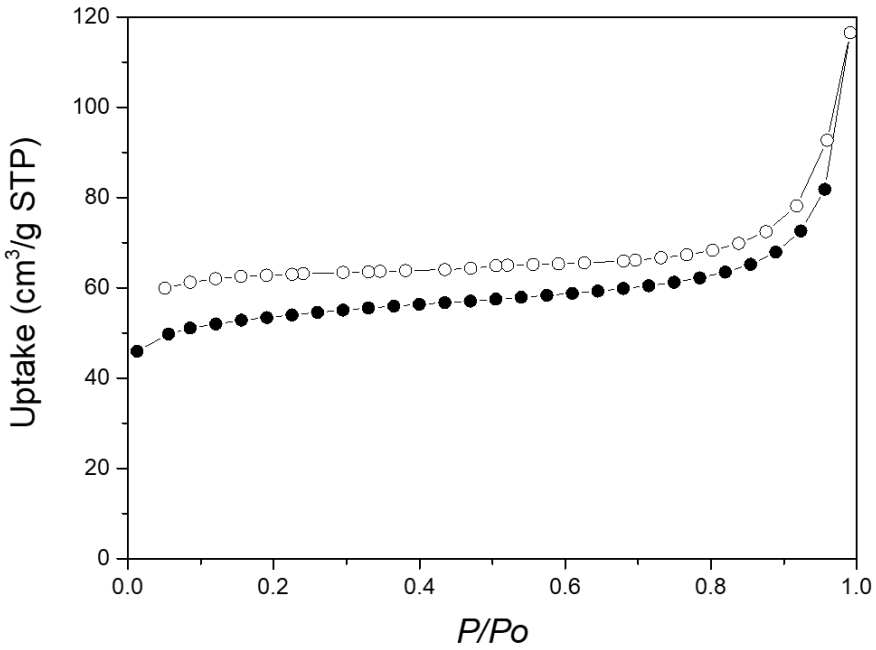


Figure S2. N_2 adsorption (filled symbols) and desorption (empty symbols) isotherms of EB-TAPB-TFP COF.

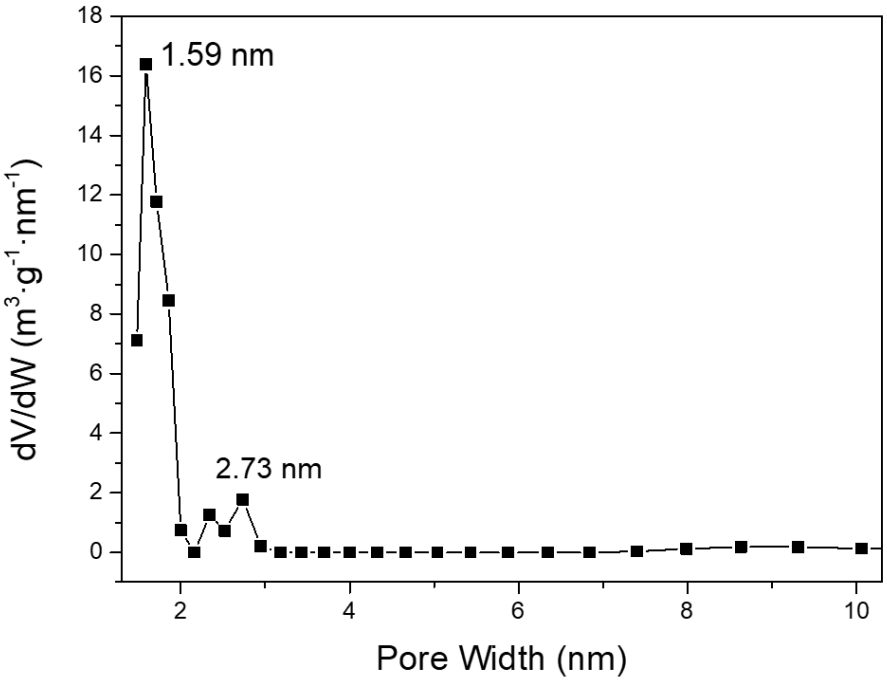
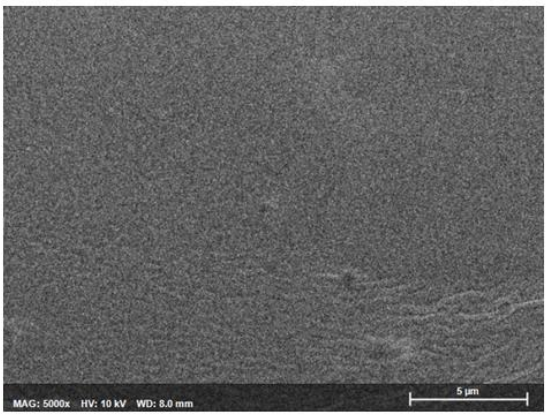


Figure S3. Pore size distribution analysis of EB-TAPB-TFP COF.

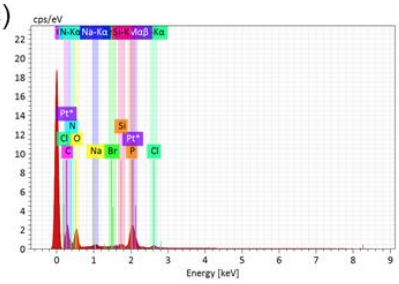
(a)



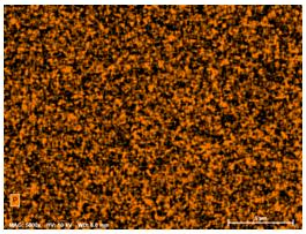
(b)

Element	Weight%	Atomic%
C	34.71	41.56
N	24.02	24.66
O	33.87	30.44
P	7.08	3.28
Br	0.32	0.06
	100	

(c)



(d)



(e)

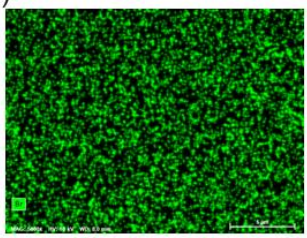


Figure S4. (a) SEM image of the EB-TAPB-TFP NSs-PDNA-miRNA heteroduplex hybrid and (b) corresponding elemental contents. (c) Total surface element composition of EB-TAPB-TFP NSs-PDNA-miRNA heteroduplex hybrid by SEM-EDX. Color mapping for (d) phosphorus and (e) bromine by EDX.