



Supporting Information

for

A biomimetic nanofluidic diode based on surface-modified polymeric carbon nitride nanotubes

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Beilstein J. Nanotechnol. **2019**, *10*, 1316–1323. [doi:10.3762/bjnano.10.130](https://doi.org/10.3762/bjnano.10.130)

Additional experimental data

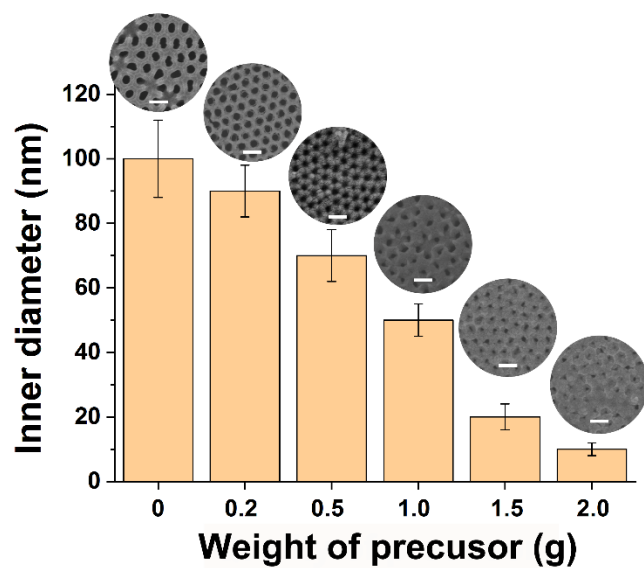


Figure S1: The SEM images of the carbon nitride nanotube membrane with diameters of 100 nm (bare AAO), 90 nm, 70 nm, 50 nm, 20 nm, and 10 nm. Scale bar 200 nm.

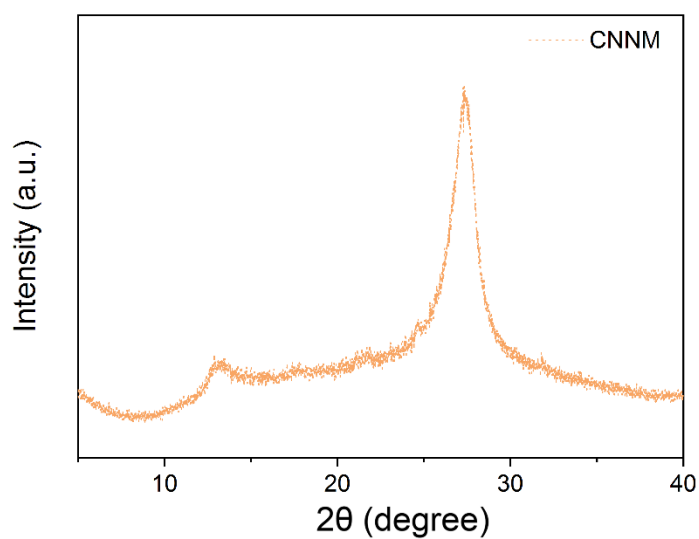
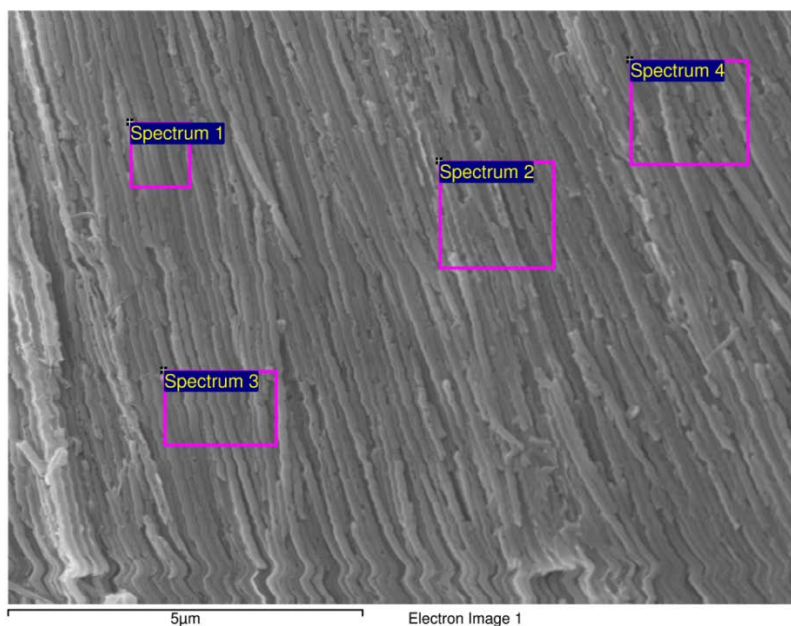


Figure S2: XRD of CNNM.



Processing option : All elements analysed (Normalised)

Spectrum	In stats.	C	N	Total
Spectrum 1	Yes	43.64	56.36	100.00
Spectrum 2	Yes	37.63	62.37	100.00
Spectrum 3	Yes	43.29	56.71	100.00
Spectrum 4	Yes	40.44	59.56	100.00
Mean		41.25	58.75	100.00
Std. deviation		2.81	2.81	
Max.		43.64	62.37	
Min.		37.63	56.36	

All results in weight%

Figure S3: SEM image and corresponding elemental content of CNNM.

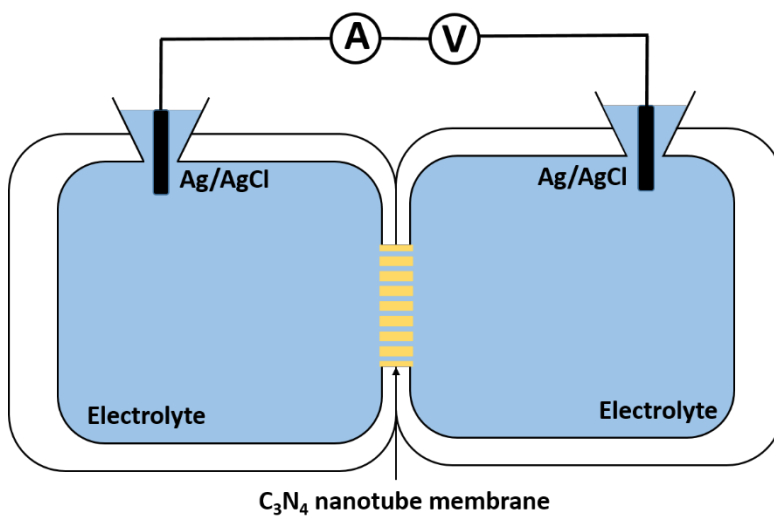


Figure S4: Schematic test setup.

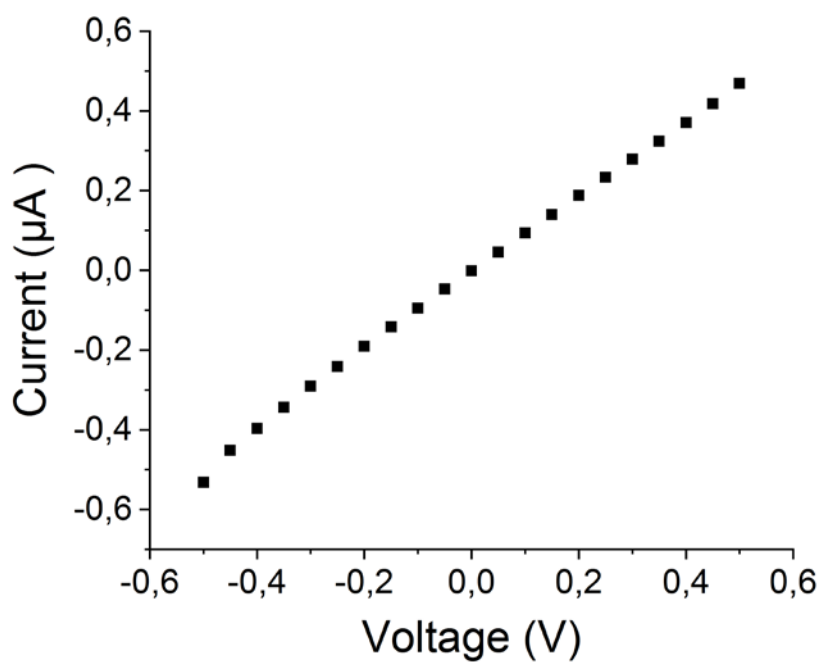


Figure S5: Symmetric current–voltage curve of bare carbon-nitride nanotube membrane.

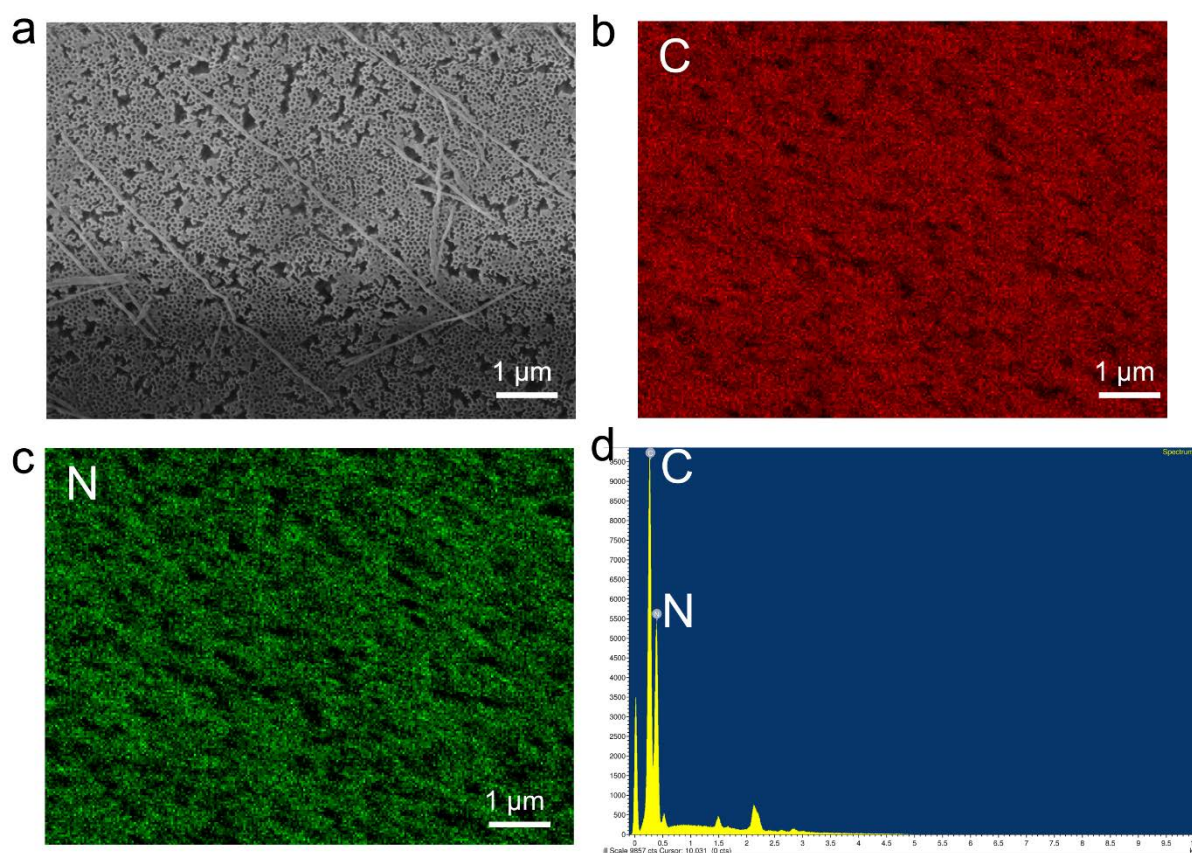


Figure S6: SEM images and corresponding elemental content of CNNM.