Supplementary Information

Ag-Au-PANI core-shell nanowire network for visible-to-infrared data encryption and supercapacitor applications

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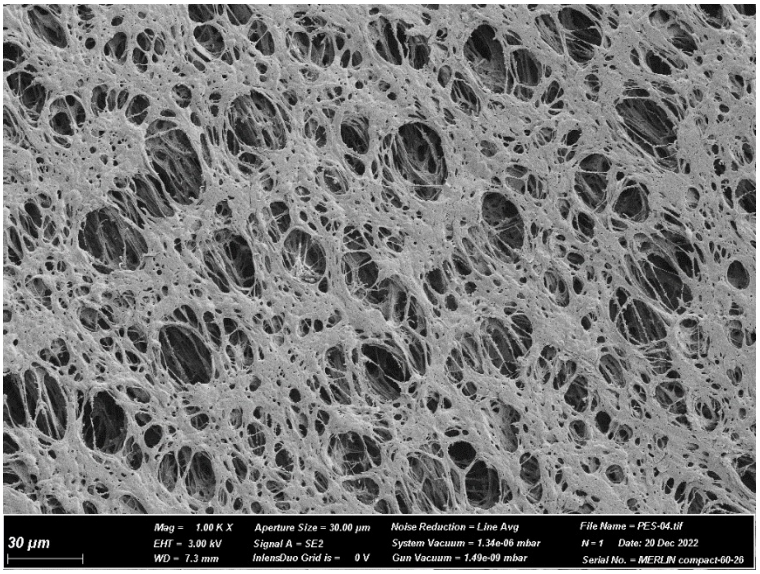

Figure S1. SEM image of hydrophilic porous PES membrane.

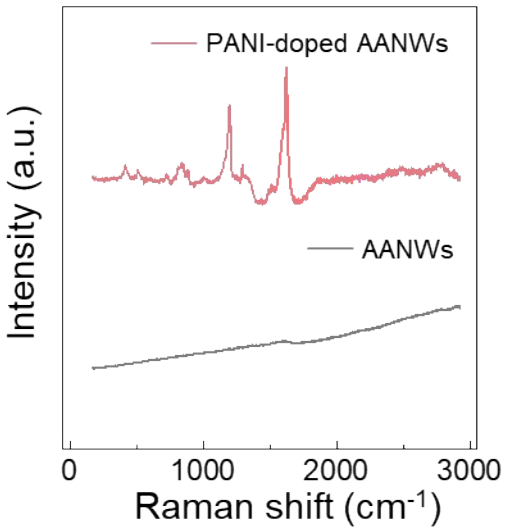

Figure S2. Raman spectra of AANWs and PANI-doped AANWs.

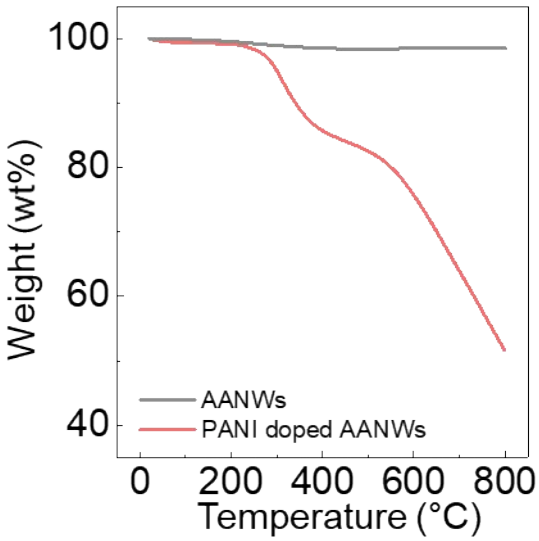

Figure S3. Thermogravimetric analysis (TGA) data of AANWs and PANI-doped AANWs.

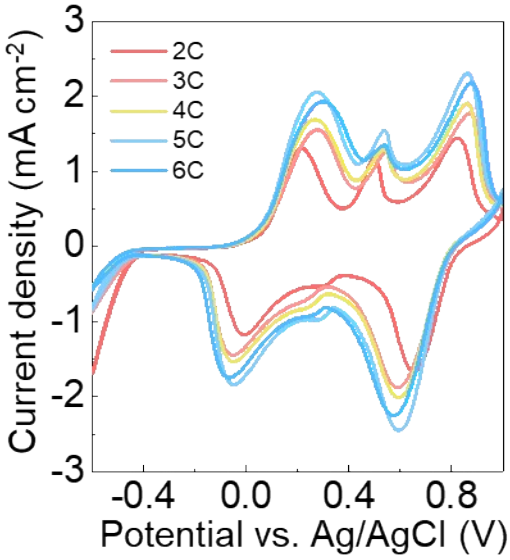

Figure S4. Cyclic voltammetry (CV) data of PANI-doped AANWs with different electro-polymerization charge.

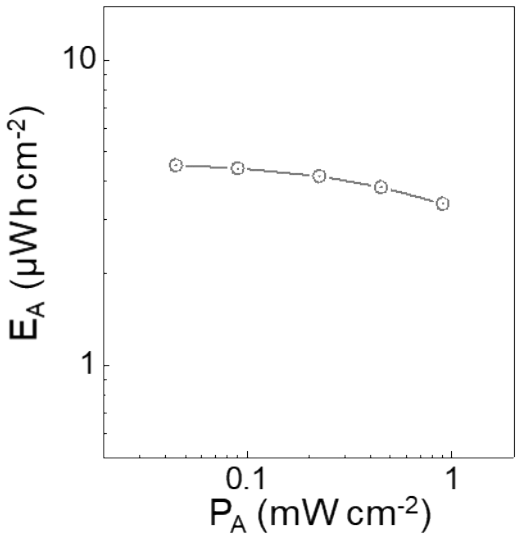

Figure S5. Energy and power density of supercapacitor.

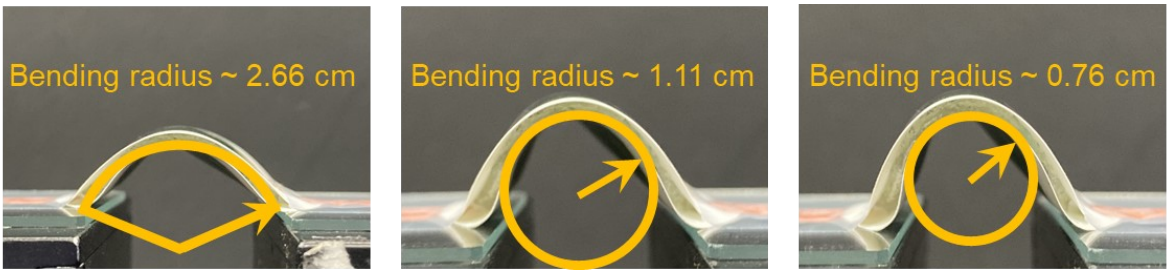

Figure S6. Photograph of bending profile of the device

Table S1. Performance comparison with the recent supercapacitor studies

Ref	Material	Areal specific capacitance	Structure	Rigid/Flexible
This work	Ag-Au-PANI NWs	40.2, 37.1, and 34.1 mF cm^{-2} at 0.1, 0.5, and 1 mA cm^{-2}	Core-shell NW	Flexible
[1]	N-doped porous carbon and Co_3O_4 NPs	1.115 F cm^{-2} at 0.45 mA cm^{-2}	Honeycomb 3D structure	Rigid
[2]	RGO/KCu_7S_4	7.33 F cm^{-2} at 0.5 A g^{-1}	3D printed structure	Rigid
[3]	PANI coated on foamed PLA	27.73 mF cm^{-2} at 0.05 mA cm^{-2}	3D foam	Flexible
[4]	PANI-coated carbon cloth	875.6 mF cm^{-2} at 1 mA cm^{-2}.	Textile	Flexible
[5]	PEDOT:PSS/CNT-coated PU/carbon black	47 mF cm^{-2} at 8 mA cm^{-2}	3D composite	Flexible
[6]	Amorphous NiCo-OH	9.0 F cm^{-2} at 2 mA cm^{-2}	Nanosheet composite	Rigid
[7]	MnO_2 microsphere/PEDOT:PSS	135.4 mF cm^{-2} at 0.08 mA cm^{-2}	Textile	Flexible
[8]	Graphene oxide/polyamic acid	870.3 mF cm^{-2} at 4.6 mA cm^{-2}	3D printed structure	Rigid
[9]	MXene/Porous carbon/CNT	364.8 mF cm^{-2} at 0.5 mA cm^{-2}	Film	Flexible
[10]	$Ti_3C_2T_x/V_2O_5$	129 mF cm^{-2} at 0.34 mA cm^{-2}	Microsupercapacitor	Flexible

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