Supporting Information

Electrospun nanofiber templated assembly of hybrid nanoparticles

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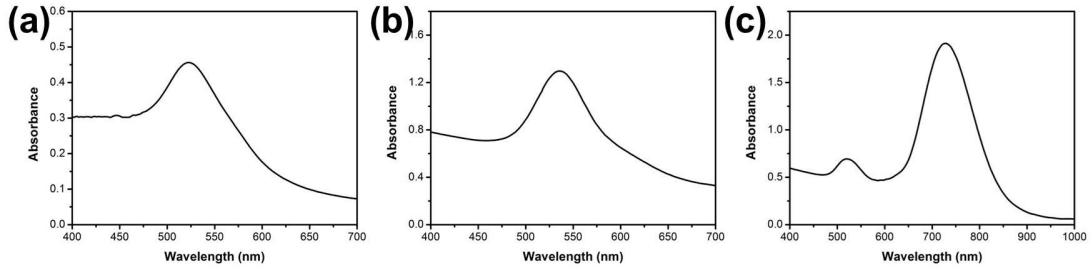

Fig. S1 UV-vis spectra of (a) Au sNPs, (b) Au bNPs, (c) Au NRs.

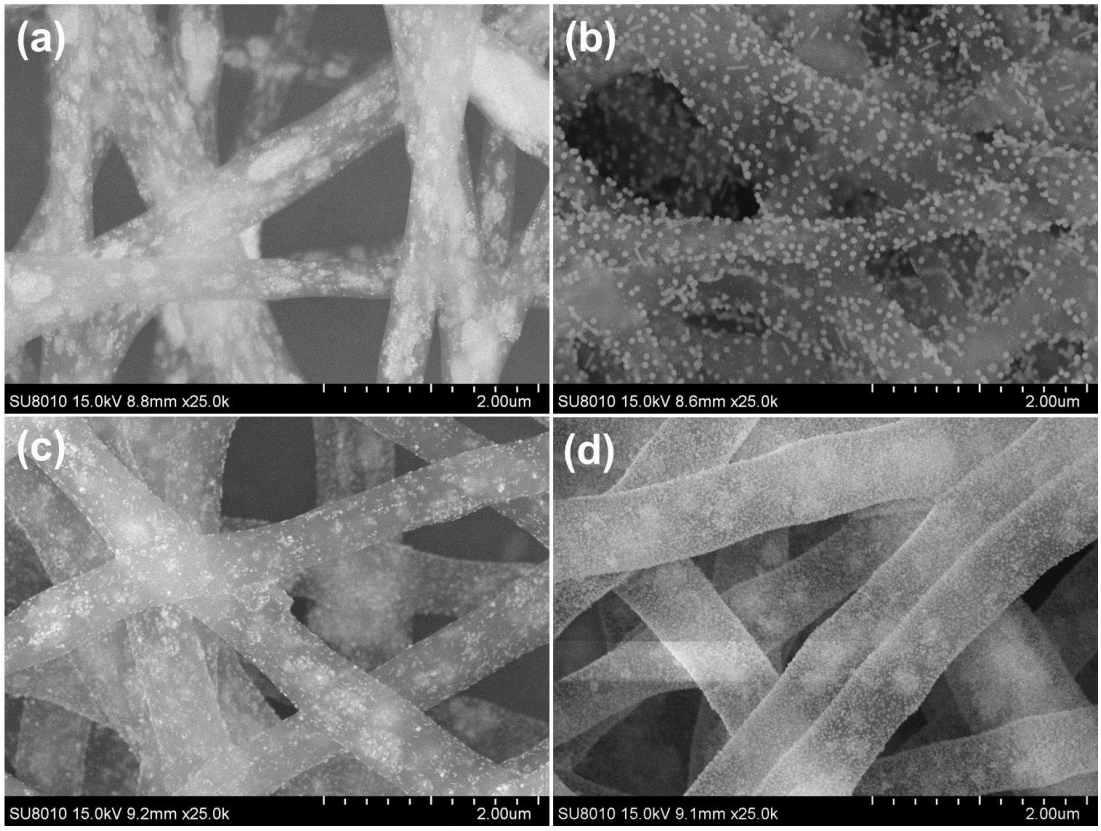

Fig. S2 Low magnification SEM images of the PAA/PVA electrospun nanofibers assembled with (a) Au sNPs, (b) Au sNPs-Au bNPs, (c) Au sNPs-Au NRs and (d) Au sNPs–Pd NCs.

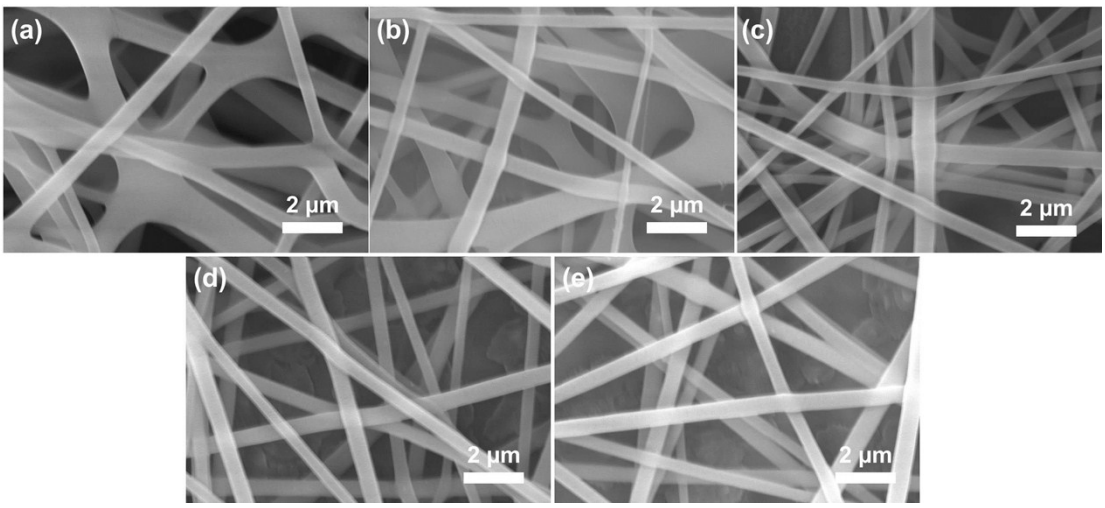

Fig. S3 SEM (S-4300, nanofibers were sputtered with a gold layer) images of the PAA/PVA electrospun nanofibers assembled with Au sNPs. The needle-to-collector distances are (a) 10 cm, (b) 15 cm, (c) 20 cm, (d) 25 cm and (e) 30 cm, respectively.

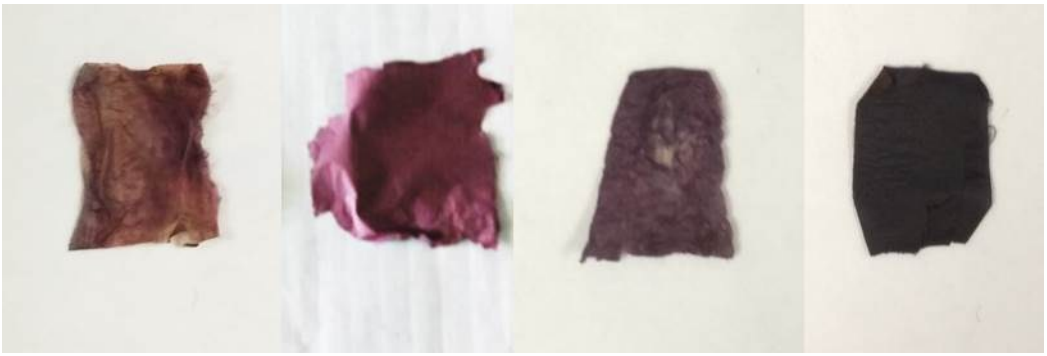

Fig. S4 Photographs of the PAA/PVA electrospun nanofibers assembled with different NPs: from left to right, Au sNPs, Au sNPs-Au bNPs, Au sNPs-Au NRs and Au sNPs–Pd NCs. The size of the membranes is about 1.5 cm × 1.5 cm.

Table S1 Comparison of the Au sNPs-Au bNPs composite nanofibrous membrane for 4-ATP detection with other nanofiber membranes.

Refs.	Materials	Detection limit
1	Ag NPs assembled on PEI/PVA nanofibers	10^{-8} M
2	plate-like Ag NCs gown on nanofibers	10^{-10} M
3	Ag NPs assembled on PE nanotubes	10^{-8} M

4	Ag NP functionalized glass fiber	5×10^{-8} M
5	Ag NPs decorated on 3D TiO_2 film	10^{-7} M
6	Ag NCs assembled tapered fiber probe	10^{-7} M
7	Au-coated magnetic nanoparticles	10^{-9} M
8	Au NPs decorated inverse opal capillary	10^{-9} M
9	Au NPs decorated on PAA/PVA nanofibers	10^{-8} M
10	ZnO nanofibers deposited on silver foil	10^{-12} M
11	Au NPs decorated on cellulose nanofibers	10^{-12} M
This work	Au sNPs-Au bNPs composite nanofibers	10^{-13} M

References for Table S1:

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Table S2 ICP results of the the PAA/PVA electrospun nanofibers assembled with different NPs.

Sample	Au	Pd	Loading Contents
Au sNPs (10.18 mg)	1.07 mg	N/A	Au sNPs: 10.5 wt%
Au sNPs-Au bNPs (9.80 mg)	2.30 mg	N/A	Au bNPs: 13.0 wt%
Au sNPs-Au NRs (10.62 mg)	2.23 mg	N/A	Au NRs: 10.5 wt%
Au sNPs–Pd NCs (10.25 mg)	1.06 mg	1.31 mg	Pd NCs: 12.8 wt%