Electronic Supplementary Information (ESI) for

Platinum-Decorated Reduced Graphene Oxide/Polyaniline:Poly(4-styrenesulfonate) Hybrid Paste for Flexible Dipole Tag-Antenna Application

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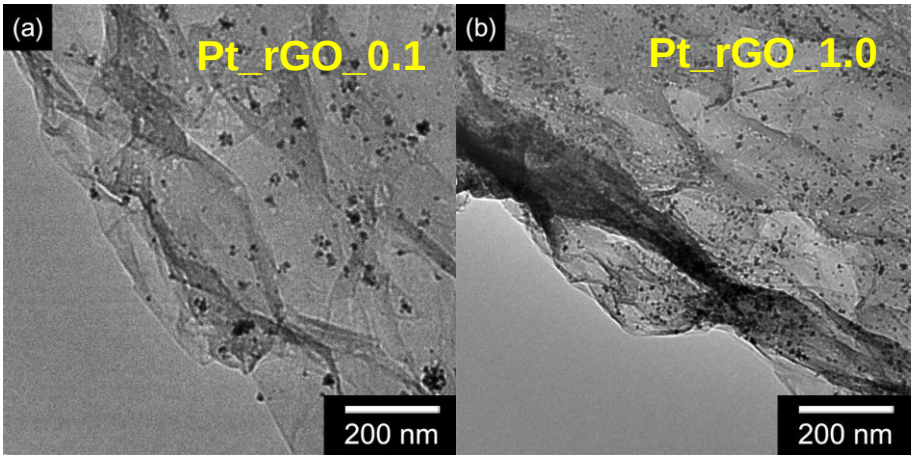

Figure S1. TEM images of (a) Pt_rGO_0.1 and (b) Pt_rGO_1.0 sheets.

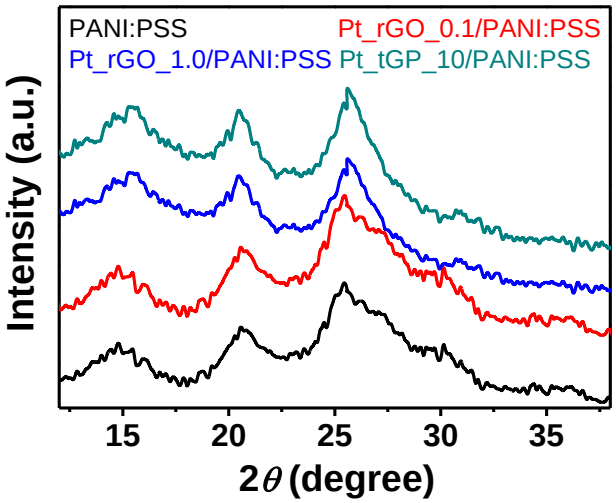

Figure S2. XRD spectra of various PANI-based hybrid materials (black: rGO/PANI:PSS; red: Pt_rGO_0.1/PANI:PSS; blue: Pt_rGO_1/PANI:PSS; green: Pt_rGO_10/PANI:PSS).

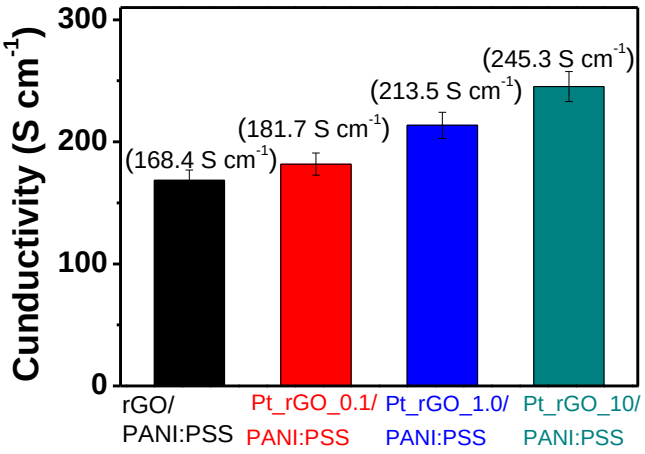

Figure S3. Electrical conductivity of Pt_rGO/PANI:PSS with different Pt amount (black: Pt_rGO_0.1/PANI:PSS; red: Pt_rGO_1.0/PANI:PSS; blue: Pt_rGO_10/PANI:PSS).

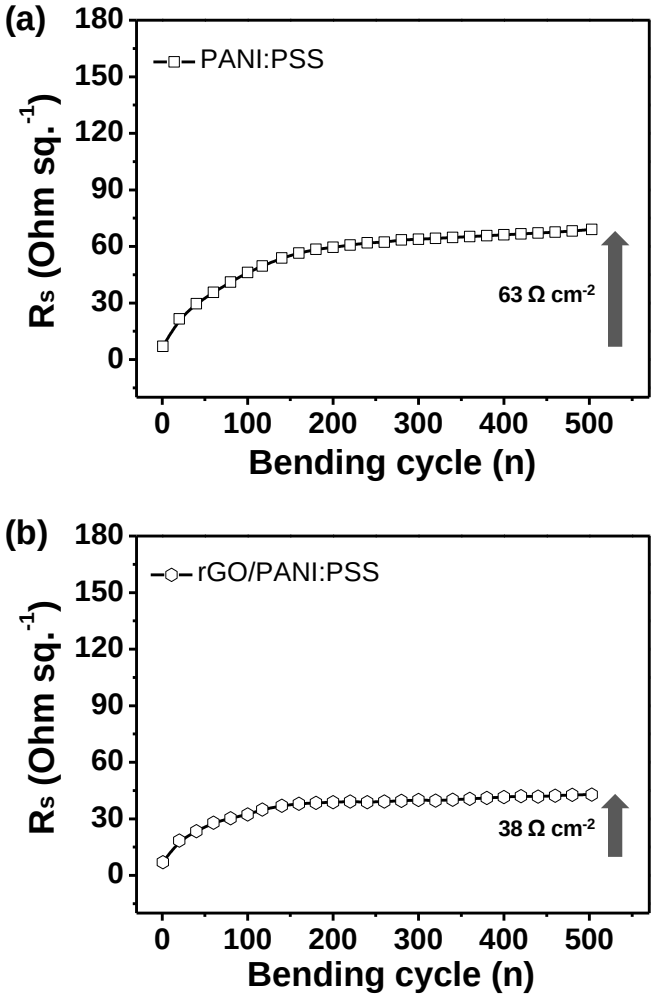

Figure S4. Surface resistance changes of (a) PANI:PSS and (b) rGO/PANI:PSS micropatterns with enhancing of bending cycles.

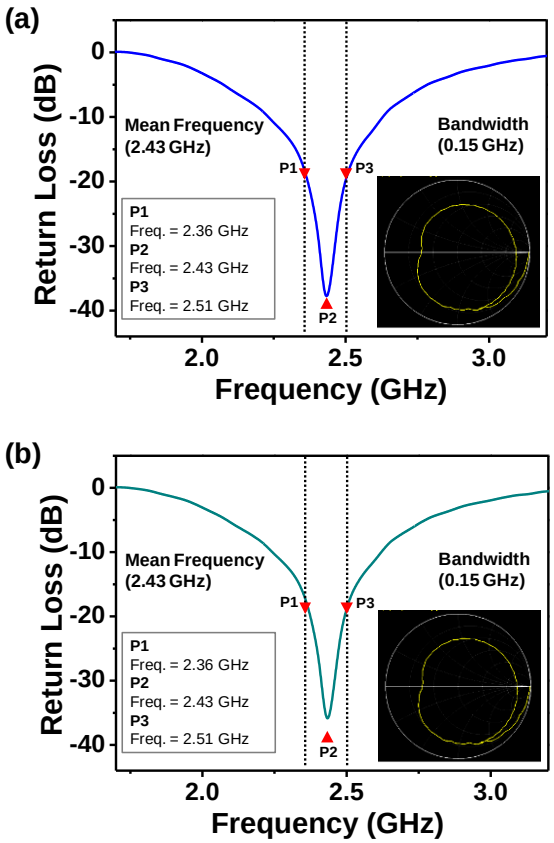

Figure S5. Return loss curve of the dipole tag antenna (a) under bending 90 degree and (b) after bending using Pt_rGO/PANI:PSS-based electrode (inset: Smith chart impedance diagram).

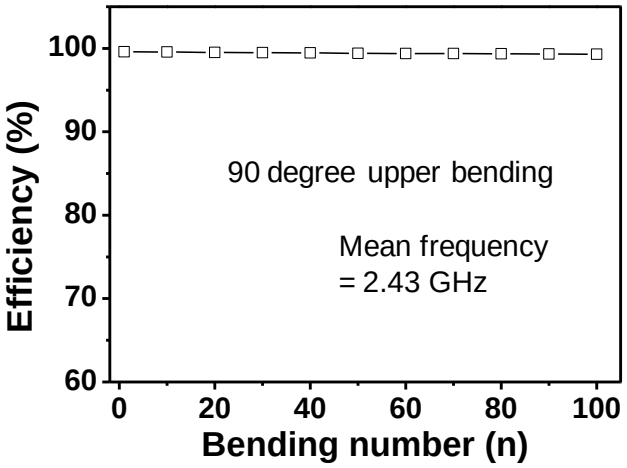

Figure S6. Transmitted power efficiency at mean frequency (2.43 GHz) with bending cycles.