Supporting Information

Synthesis and Characterization of Polyaniline Nanoparticles with Enhanced Microwave Absorption

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Figure S1 SEM image of C-PANI.
Fig. S2 The elution profiles of PANI-NP1, PANI-NP5 and PANI-NP10 in GPC (left); the magnification of the range from 7.5 to 8.7 min (right).
**Table S1** The relative molecule weights from GPC.

<table>
<thead>
<tr>
<th></th>
<th>$M_n$</th>
<th>$M_w$</th>
<th>$M_z$</th>
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<tbody>
<tr>
<td>PANI-NP1</td>
<td>271.11</td>
<td>286.95</td>
<td>303.01</td>
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<tr>
<td>PANI-NP5</td>
<td>251.64</td>
<td>264.68</td>
<td>278.06</td>
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<tr>
<td>PANI-NP10</td>
<td>245.38</td>
<td>260.18</td>
<td>275.04</td>
</tr>
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$M_n$: Number-average molecular weight;  
$M_w$: Weight-average molecular weight;  
$M_z$: Z-average molecular weight;
Figure S3 Real parts ($\mu'$) and imaginary parts ($\mu''$) of complex permeability of C-PANI and PANI-NPx in the frequency range of 1-18 GHz.
Fig. S4 Normalized input impedance ($Z_{in}$) of C-PANI and PANI-NP$_x$ with an absorber thickness of 2 mm in the frequency range of 1-18 GHz.