Supporting Information

Graphene Oxide/Ferrocene-containing Polymer/Gold Nanoparticle Triple Nanocomposite

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Figure 1. GPC curves of PFcMAss homopolymer and free PFcMAss polymer during surface-initiated ATRP.

Table 1. Elemental analysis of TRIS-GO-Ini, GO-PFcMAss and GO-PFcMAss- AuNPs*.

<table>
<thead>
<tr>
<th>Sample</th>
<th>C% (mol%)</th>
<th>N% (mol%)</th>
<th>O% (mol%)</th>
<th>Fe% (mol%)</th>
<th>S% (mol%)</th>
<th>Au% (mol%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRIS-GO-Ini</td>
<td>79.51</td>
<td>1.83</td>
<td>17.48</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
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<tr>
<td>GO-PFcMAss</td>
<td>72.71</td>
<td>1.31</td>
<td>23.26</td>
<td>1.01</td>
<td>1.60</td>
<td>NA</td>
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<tr>
<td>GO-PFcMAss-AuNPs</td>
<td>67.67</td>
<td>0.63</td>
<td>17.03</td>
<td>0.04</td>
<td>0.38</td>
<td>0.06</td>
</tr>
</tbody>
</table>

* Obtained from XPS.
Scheme S1. Preparation of PFeMAss-protected AuNPs by optimized Brust-Schiffrin approach.

Figure 2. Photos of solutions of AuNPs prepared by Brust-Schiffrin protocol with (A) and without (B) the addition of GO-PFeMAss.

Figure 3. $^1$H-NMR spectra of PFeMAss and PFeMAss-AuNPs in CDCl$_3$. 
Figure 4. FT-IR spectra of PFcMAss and PFcMAss-AuNPs.

Figure 5. Tapping mode AFM images with section analysis of PFcMAss-functionalized AuNPs.