Supporting Information


Bin Li, Gao Chen, Fanbo Meng, Taihang Li, Jun Yue, Xiabin Jing, Yubin Huang

Fig. S1 $^1$H NMR spectrum (300 MHz, CDCl$_3$) of PEAG$_{6K}$

Fig. S2 MALDI-TOF mass spectrum of PEAG$_{6K}$
Fig. S3 ¹H NMR spectrum (300 MHz, CDCl₃) of PEAG₆k-Ac

Fig. S4 ¹H NMR spectrum (300 MHz, CDCl₃) of PEAG₆k-OH

Fig. S5 ¹H NMR spectrum (300 MHz, CDCl₃) of PEAG₆k-PCL 1b
**Figure S6** GPC curves of PEAG6K and PEAG6K-g-PCL 1a, 1b, 1c

**Figure S7** Plot of $I_{333}/I_{333}$ vs. logC of PEAG-g-PCL in deionized water

**Figure S8** TEM images of self-assembled polymer 1a, $f_{PCL}=67\%$ (A), polymer 1b, $f_{PCL}=73\%$ (B), polymer 1c, $f_{PCL}=79\%$ (C)

**Table S1** Characteristic absorption peak of encapsulated Hb in different gas-binding states

<table>
<thead>
<tr>
<th>State</th>
<th>wavelength of the maximum absorption peak (nm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>COHb</td>
<td>569, 540, 419</td>
</tr>
<tr>
<td>oxyHb</td>
<td>577, 541, 415</td>
</tr>
<tr>
<td>deoxyHb</td>
<td>555, 430</td>
</tr>
</tbody>
</table>