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**Supporting Information** 

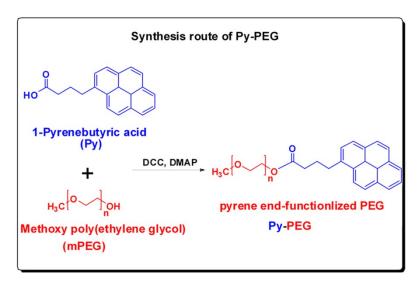
3D graphene oxide supramolecular hybrid hydrogel with wellordered interior microstructure prepared by a host-guest inclusion-induced self-assembly strategy

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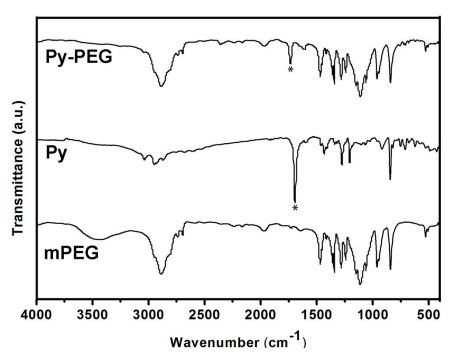
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**Keywords**: Supramolecular hybrid hydrogel, self-assembly, host-guest inclusion, graphene oxide, well-ordered microstructure

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Scheme S1. Synthesis route of Py-PEG



**Fig. S1** FT-IR spectra of mPEG, Py and Py-PEG. IR (KBr, cm<sup>-1</sup>): 2889 ( $\nu_{C-H}$ ), 1737 ( $\nu_{C-O}$ ), 1468 ( $\nu_{C-H}$ ), 1242 ( $\nu_{C-O}$ ), 1113 ( $\nu_{C-O-O}$ ), 1690, 843 (Pyrene group).

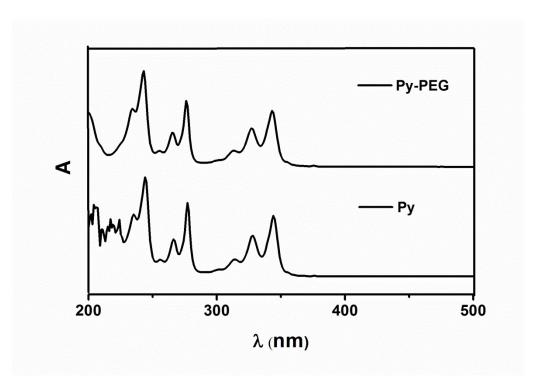


Fig. S2 UV-vis spectra of Py and Py-PEG.

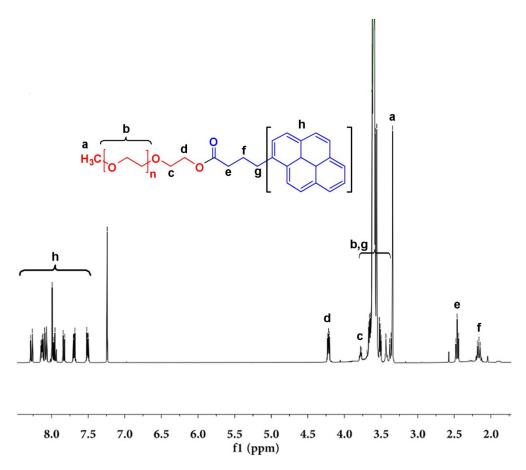


Fig. S3 <sup>1</sup>H NMR spectrum of Py-PEG in CDCl<sub>3</sub>.

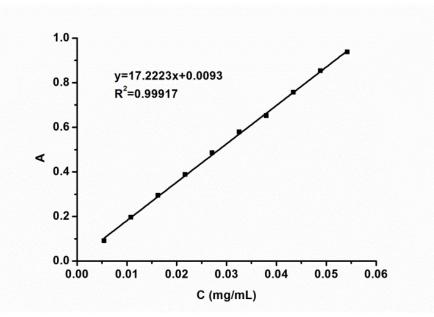
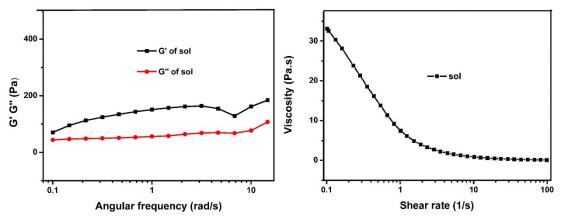
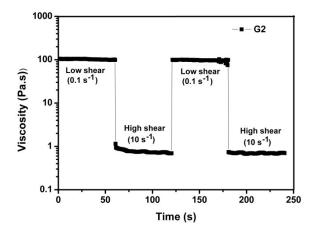


Fig. S4 Calibration curve of DOX



**Fig. S5** Dynamic and steady rheological behaviors of the Py-PEG/α-CD sol with same concentration of Py-PEG and α-CD in hybrid hydrogels.



**Fig. S6** Viscosity changes of G2 monitored between low shear rate  $(0.1 \text{ s}^{-1})$  and high shear rate  $(10 \text{ s}^{-1})$  at  $20 \text{ }^{\circ}\text{C}$