

β -D-Glucose pentaacetate derivative as an efficient phase selective gelator for oil spill recovery

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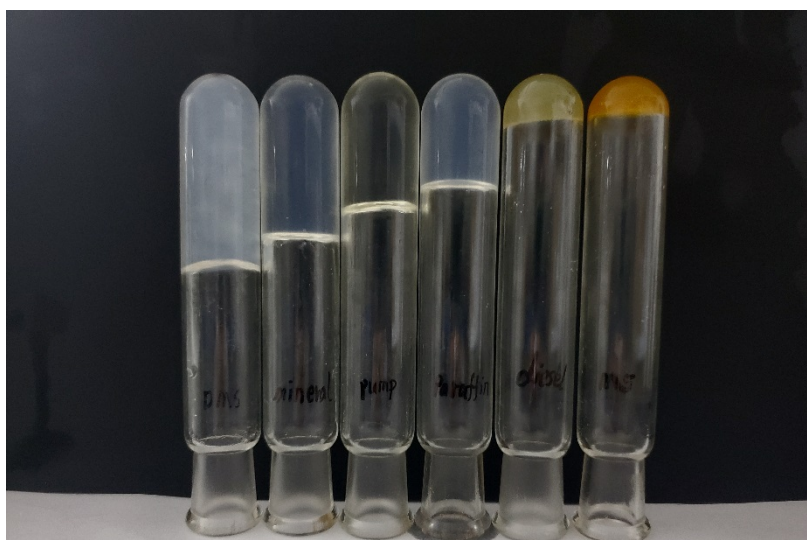
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(a) (b) (c) (d) (e) (f)

Figure S1. Oleogel (stable to inversion) of compound 1 at MGC. From left to right (a) DMS, (b) mineral oil, (c) pump oil, (d) paraffin oil, (e) diesel oil, and (f) MS.

Table S1. The thermally reversible gel-sol transition temperature of oleogel at different concentration

Concentration Solvent	5 wt%	4 wt%	3 wt%	2 wt%	1 wt%
	DMS	153.7°C	146.4°C	139.6°C	127.5°C
Mineral oil	148.3°C	141.5°C	134.7°C	123.3°C	106.3°C
Paraffin oil	144.2°C	138.3°C	131.4°C	119.5°C	101.8°C
MS	136.9°C	129.6°C	118.7°C	102.4°C	81.6°C

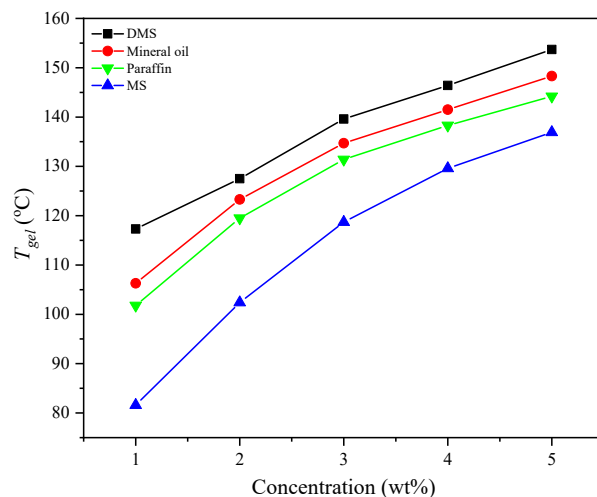


Figure S2. Plots of Tgel versus Concentration of compound 1 (wt%) in tested oils

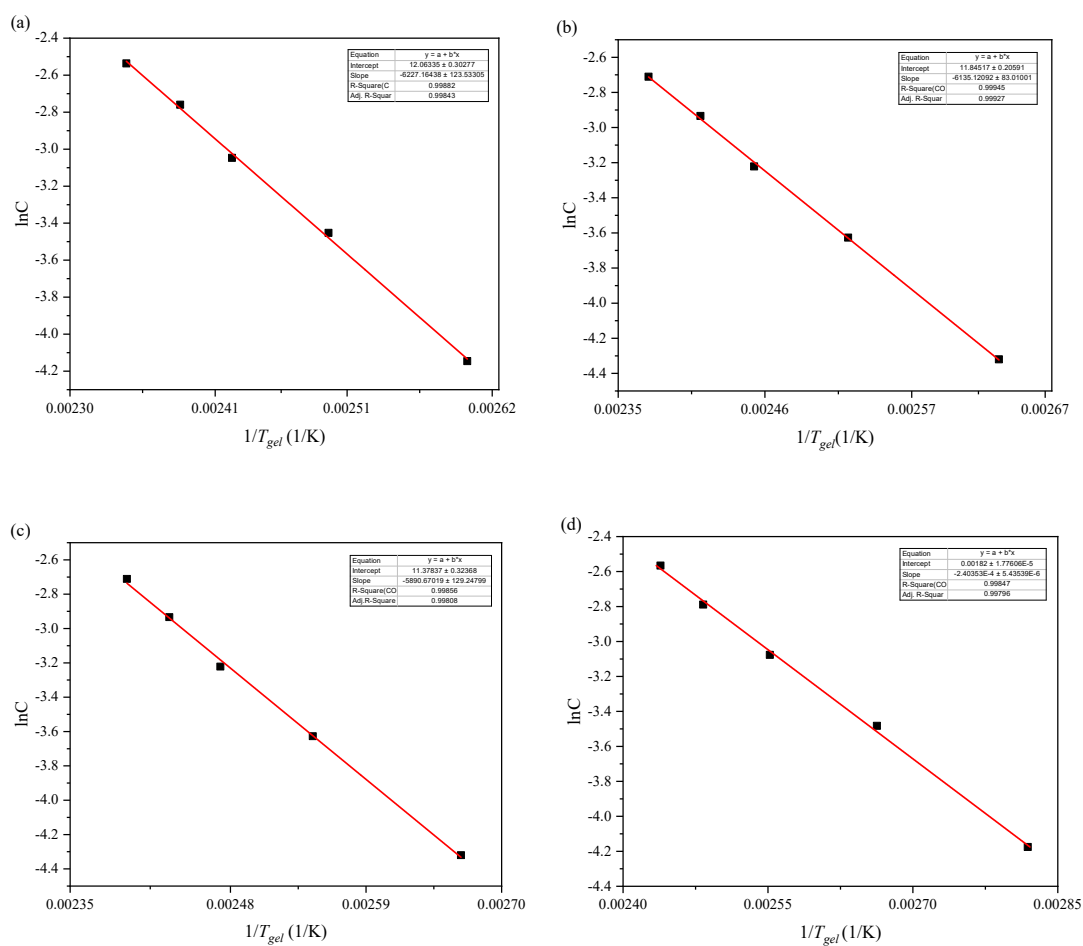


Figure S3. Plots of lnC versus 1/Tgel in tested oils. (a) DMS, (b) Mineral oil, (c) Paraffin oil and (d) MS

Table S2. Fitting parameters from the linear fit curve of the normalized values of the mean impedance magnitude for InC and 1/Tgel tested at four kind of oils

Fitting parameters	DMS	Mineral oil	Paraffin oil	MS
Equation	$y = a*x+b$			
Intercept	12.06335 ± 0.30277	11.84517 ± 0.20591	11.37837 ± 0.32368	$0.00182 \pm 1.77606E-5$
Slope	$-6227.16438 \pm 123.53305$	-6135.12092 ± 83.01001	$-5890.67019 \pm 129.24799$	$-2.40353E-4 \pm 5.43539E-6$
R-Square (COD)	0.99882	0.99945	0.99856	0.99847
Adj. R-Square	0.99843	0.99927	0.99808	0.99796

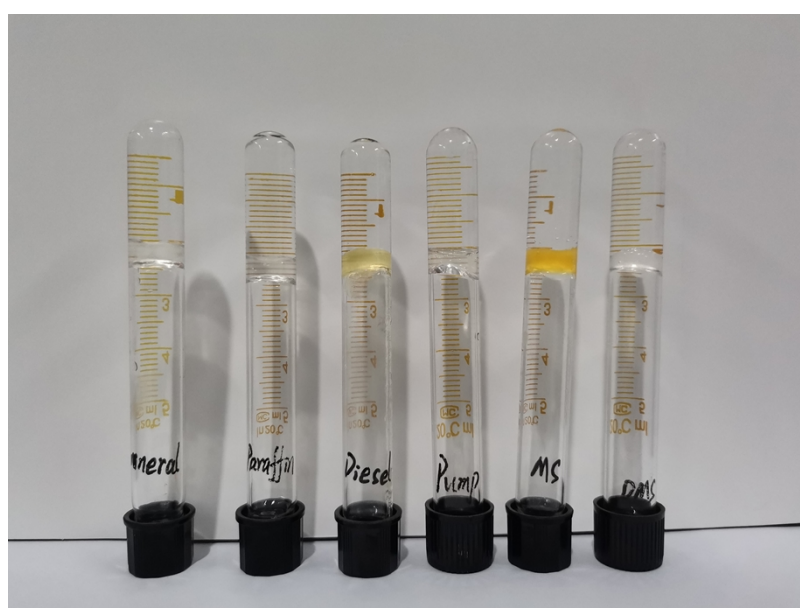


Figure S4. Selective gelation of compound 1 in oil-aqueous mixtures systems. From left to right (a) mineral oil, (b) paraffin oil, (c) diesel oil, (d) pump oil, (e) MS, and (f) DMS



Figure S5. Mineral oil oleogel (2g, 2 wt%) of compound 1 holding the weight of 120 g of water in an inverted round-bottomed flask

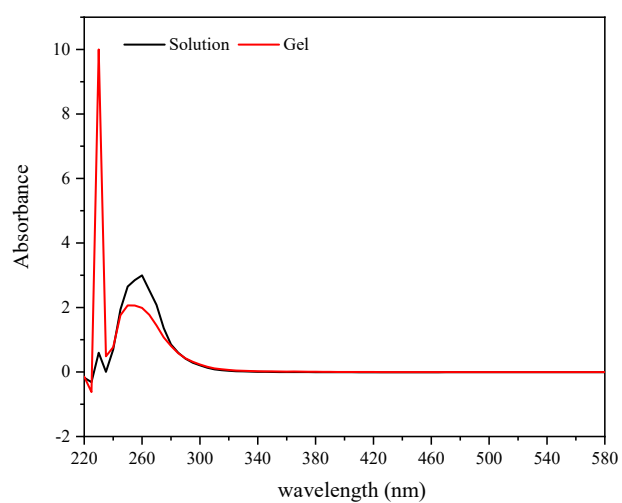


Figure S6. UV-Vis absorption spectral changes of compound 1 in solution and gel phase

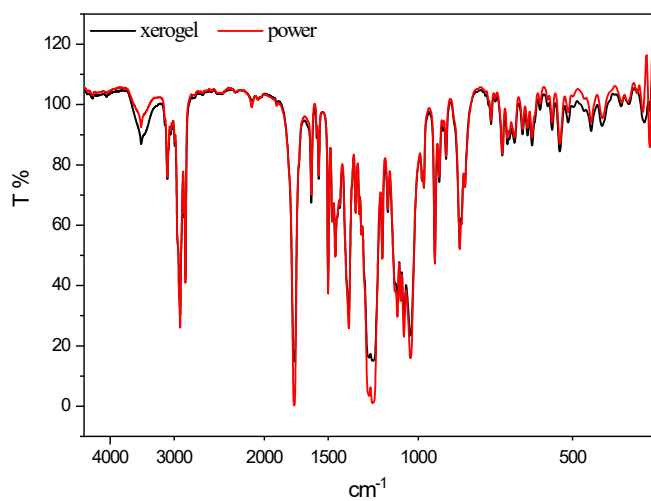


Figure S7. Fourier transform infrared spectroscopy (FTIR) spectra. Xerogel obtained from mineral oil.

Figure S8. NMR spectra

