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Mechano-responsive fluorescent xerogel based on anthracene-

substituted acylhydrazone derivative

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Fig. S1. MALDI-TOF mass spectrum of AHBP-8 (0.4mg/mL, using DMF as solvent).

Table S1 Gelation properties of AHBP-8 in various solvents

Solvents	states	Solvents	States
tetrahydrofuran	G(4.35)	cyclohexane	Р
dimethyl formamide	S	acetonitrile	Р
acetone	Р	nitrobenzene	S
chloroform	Р	heptane	Р
n-pantane	Р	hexane	Р
ethyl acetate	Р	methanol	Р
dimethy sulfoxide	Р	ethanol	Р

benzene	Р	chlorobenzene	G(4.21)
methylene choride	Р	1,2-dichloroethane	Р
o-xylene	Р	toluene	Р

S = solution, P = precipitate, G = stable gel formed at room temperature;

Numbers in parentheses present the critical gel concentration (CGC, mg/mL).



Fig.S2 Plots of T_{gel} versus the concentration of AHBP-8 in chlorobenzene and THF.



Fig. S3 Thermoreversible behavior of AHBP-8 organogel in chlorobenzene.



Fig.S4 Thermoreversible behavior of AHBP-8 organogel in THF.



Fig. S5 SEM images of AHBP-8 xerogel (6mg/mL) from (a) chlorobenzene and (b) THF.



Fig. S6 FT-IR spectra of AHBP-8 xerogel from chlorobenzene and THF.



Fig. S7 XRD patterns of AHBP-8 xerogel from chlorobenzene and THF.



Fig. S8 UV-visible absorption spectra of AHBP-8 gel and hot solution in chlorobenzene.



Fig. S9 Fluorescent images of AHBP-8 in THF/water mixtures with different water fractions (0%-90%) under the 365 nm UV light, the corresponding quantum yields is 1.02%, 0.65%, 0.98%, 11.58%, 4.4%, 4.77%, 9.13%, 5.037%, 4.802%, 3.09% (From left to right).



Fig. S10 UV-vis absorption spectra of AHBP-8 in THF/water mixtures with different water fractions.



Fig. S11 Plots of Fluorescence peak intensity with the different water fraction (0%-90%) in the THF-water mixed solution of AHBP-8($\lambda_{em} = 435 \text{ nm}, 527 \text{ nm}$).







Fig. S12 The SEM images of AHBP-8 in THF/water mixtures with different water fractions (a) 90%, (b)50%, (c)0%.



Fig. S13 Fluorescent spectra of AHBP-8 xerogel, ground sample.



Fig. S14 The repeated grinding-annealing cyclic processes of AHBP-8 xerogel from chlorobenzene.



Fig. S15 FT-IR spectra of AHBP-8 xerogel from chlorobenzene and the corresponding ground sample.



Fig. S16 DSC curves of AHBP-8 (a) xerogel and (b) ground sample in the first heating run.



Fig. S17 Fluorescent spectra of AHBP-8 xerogel, ground sample and the ground sample was treated by annealing or fuming from THF.