A turn-on type mechanochromic fluorescence material based on
defect-induced emission: Implication for pressure sensing and
mechanical printing

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Fig. S1 $^1$H NMR (600 MHz, 298 K) spectrum of AHM in DMSO-$d_6$.

Fig. S2 $^{13}$C NMR (600 MHz, 298 K) spectrum of AHM in DMSO-$d_6$. 
Fig. S3 High resolution mass spectrum of AHM.

Fig. S4 DLS analysis showing diameter of AHM in THF/water mixtures with 60% $f_w$. 
Fig. S5 Fluorescence microscopy images of AHM aggregates collected from THF-water mixtures with $f_w$ of (A) 60% and (B) 99%. Concentration: 100 μM. Excitation wavelength: 365 nm. Scale bar: 200 μm.

Fig. S6 Normalized PL spectrum of AHM crystals before (black) and after (red) grinding. AHM crystals was obtained by slow evaporation of its THF-ethanol solution.
Fig. S7 XRD diffractograms of the paper substrate (black), the pristine crystals (red) and the ground crystals (blue).

Fig. S8 Normalized UV-vis spectrum of the crystalline film before (black) and after (red) grinding. The film was deposited on a quartz plate by drop-casting (10 mM, THF).
Fig. S9 Time-dependent emission spectra of the ground film exposed to EA vapour. Time interval: 20 s. Excitation wavelength: 370 nm. Inset: plot of the maximum emission intensity versus time.

Fig. S10 Time-dependent emission spectra of the ground film exposed to THF vapour. Time interval: 20 s. Excitation wavelength: 370 nm. Inset: plot of the maximum emission intensity versus time.
Fig. S11 Time-dependent emission spectra of the ground film exposed to ethanol vapour. Time interval: 20 s. Excitation wavelength: 370 nm. Inset: plot of the maximum emission intensity versus time.

Fig. S12 Temperature dependence of the emission spectra of the ground AHM film. Excitation wavelength: 370 nm. Inset: plot of the maximum emission intensity versus temperature.
Fig. S13 TGA thermogram of AHM recorded under nitrogen at a heating rate of 10 °C/min.

Fig. S14 DSC thermogram of AHM recorded under nitrogen at a heating rate of 10 °C/min.