Electronic Supplementary Material (ESI) for Soft Matter.

Supplementary Information

Highly Sensitive Fluorescence Sensor for Ammonia Detection Based on Aggregation-Induced Emission Luminogen Doped Liquid Crystals

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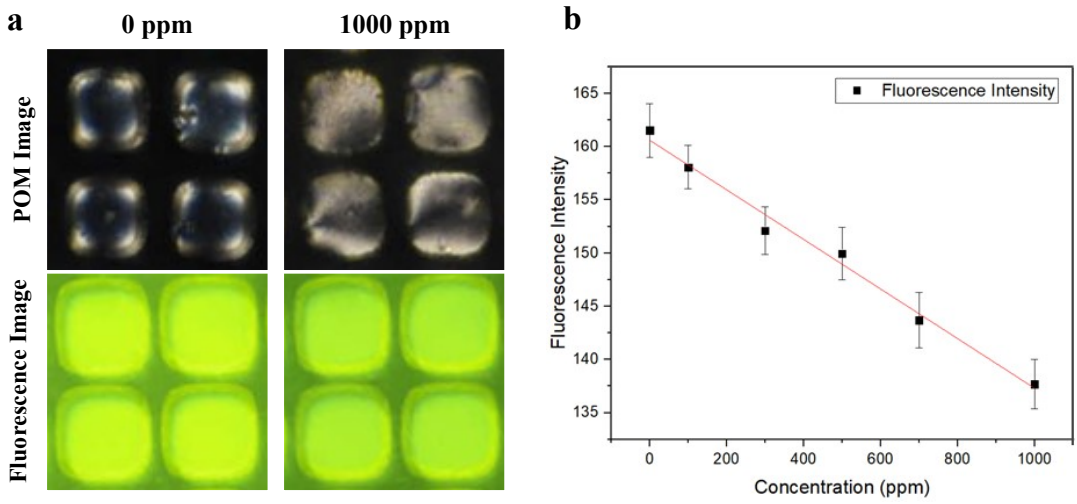

Fig. S1 (a) POM images and fluorescence images of the free-standing AIEgen-doped LC film at 10 μm in contact with air upon exposure to 0 ppm and 1000 ppm ammonia vapor. (b) Response of the average fluorescence intensity to different ammonia concentrations from 0 to 1000 ppm.

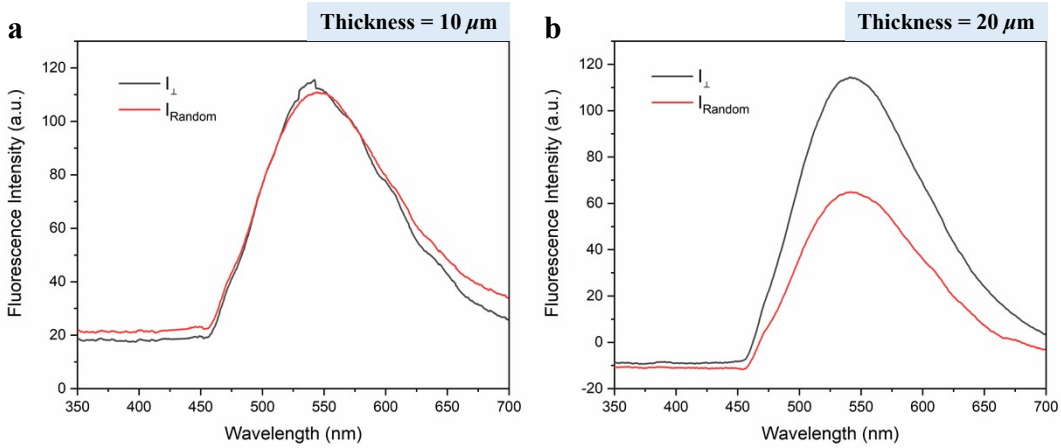

Fig. S2 Fluorescence spectra of the (a) 10 μm and (b) 20 μm LC cells consist of 0.1 wt% AIEgen-doped LC at the homeotropic and random alignment state. Excitation wavelength: 365 nm.

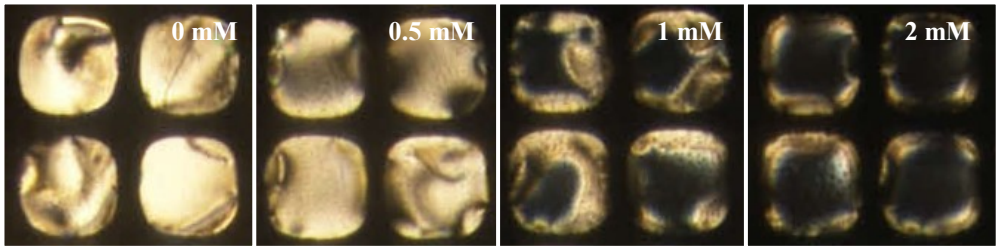

Fig. S3 Optical images of the AIEgen-doped LC system in different concentration of SDS solution.

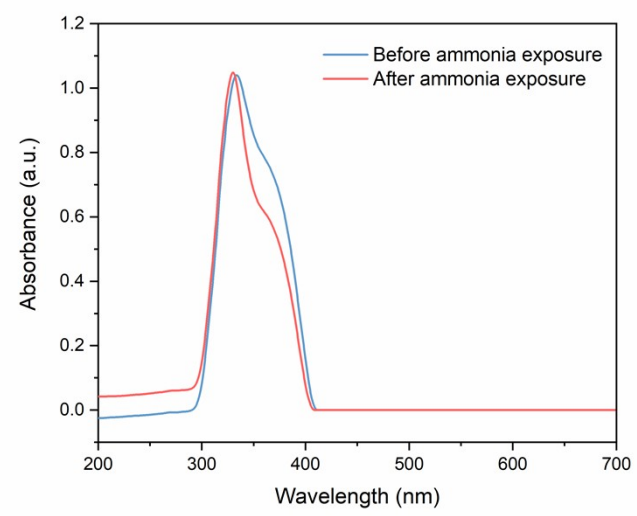

Fig. S4 Absorbance spectrum of the AIEgen-doped LC based sensor before and after ammonia exposure.

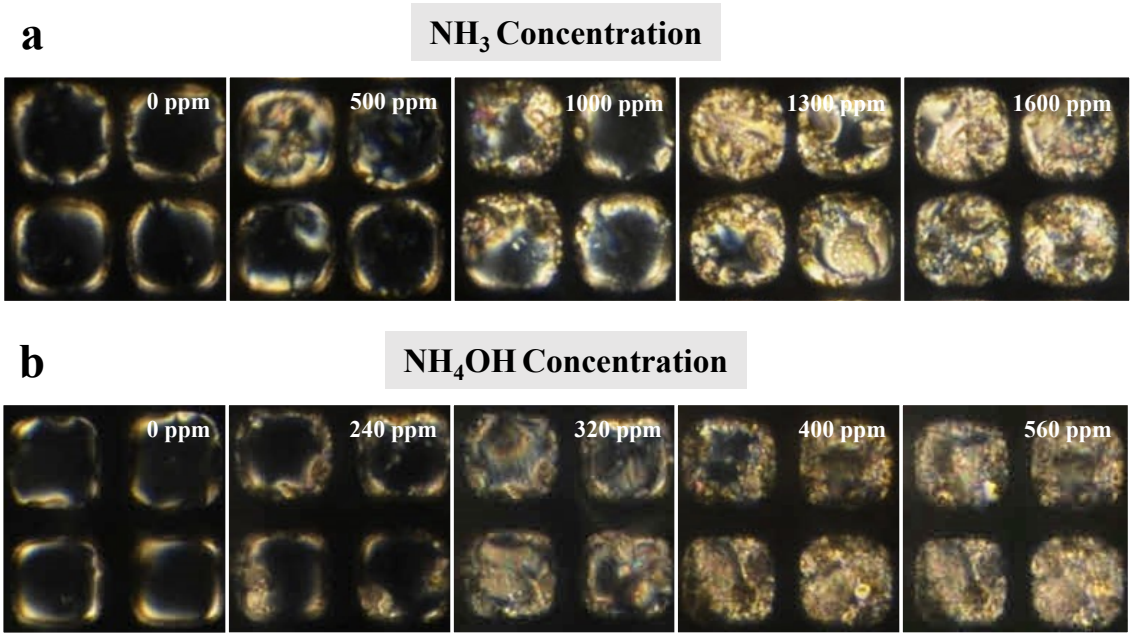

Fig. S5 Optical images of the AIEgen-doped LC based sensor in the presence of different concentrations of (a) ammonia vapor and (b) aqueous ammonia.