Supplementary Data

Fabrication of NH_2-MIL-88B(Fe) Photonic Film for Naked-eye Sensing of Organic Vapors

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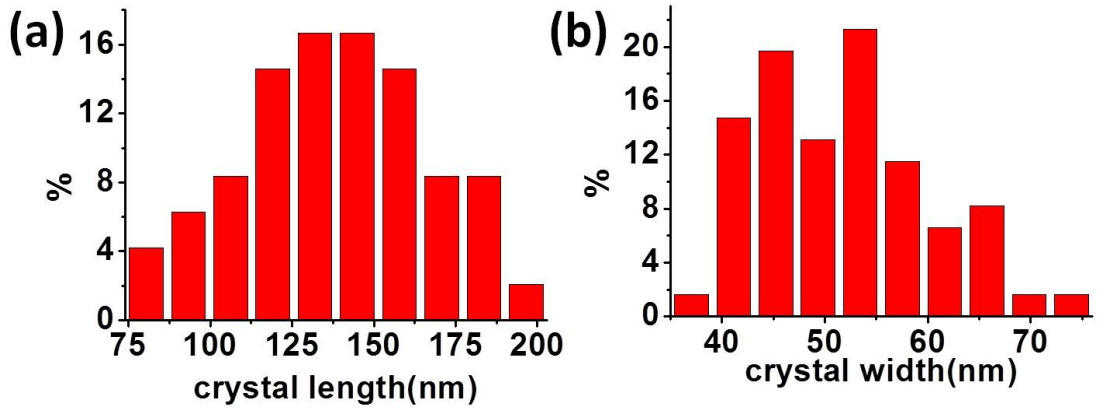

Figure S1 The distributions of length(a) and the width(b) of nanoscale MIL-88B(Fe) nanoparticles determined from SEM image.

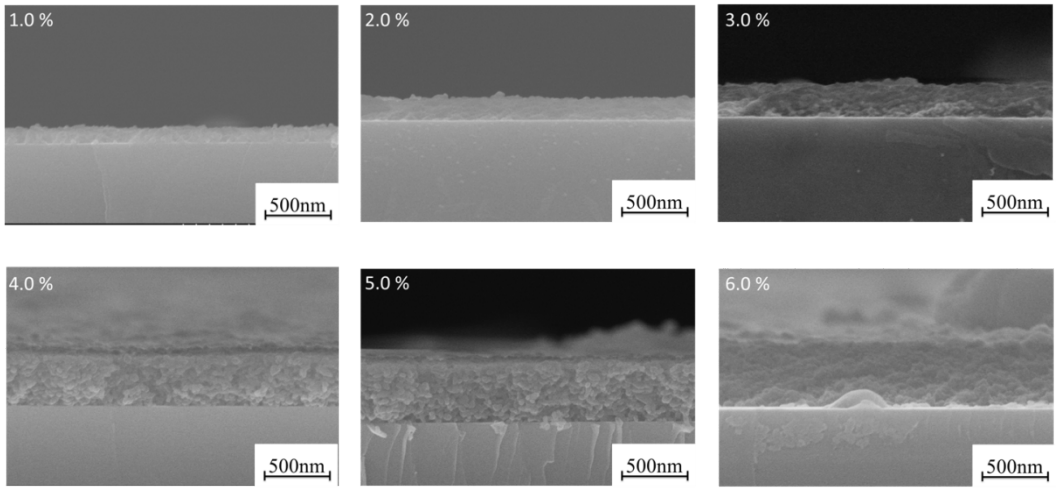

Figure S2 Cross-sectional SEM images of MIL-88B(Fe) films with different concentrations

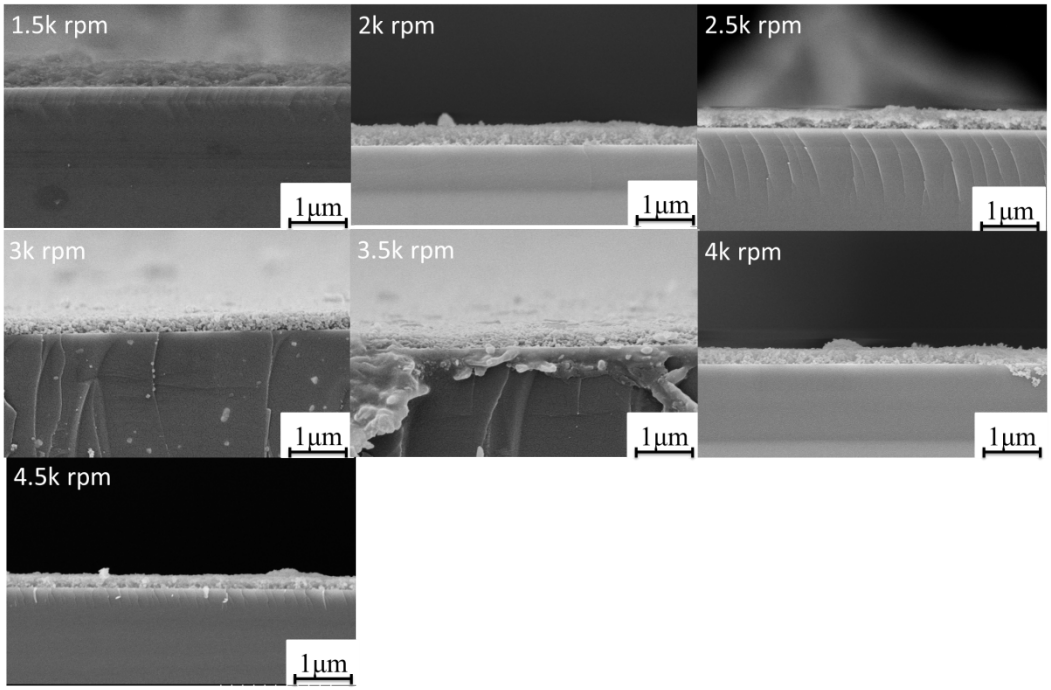

Figure S3 Cross-sectional SEM images of MIL-88B(Fe) films with different rotation speed

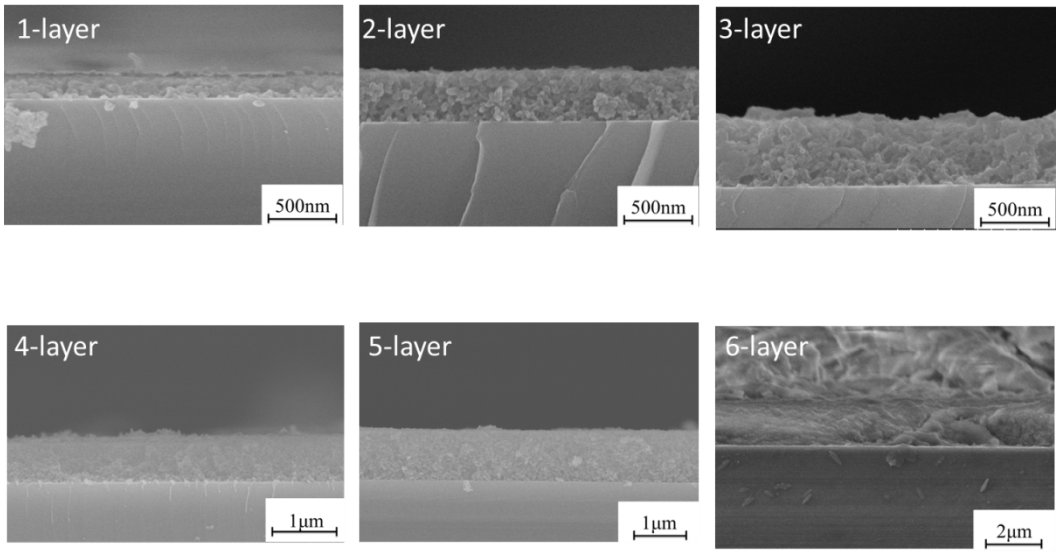

Figure S4 Cross-sectional SEM images of MIL-88B(Fe) films with different cycles

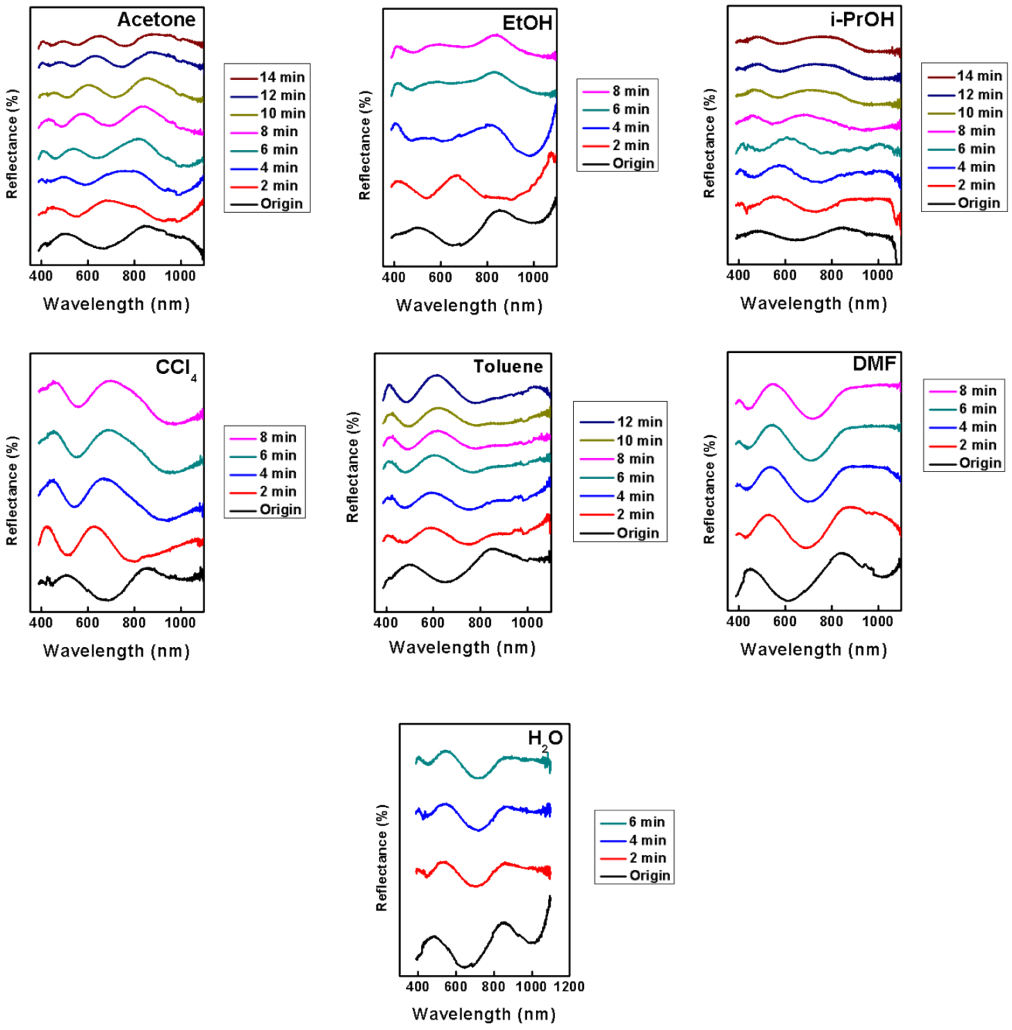

Figure S5 Reflection spectra shift of 4 wt % MIL-88B(Fe) photonic film exposed to on exposure to various vapors

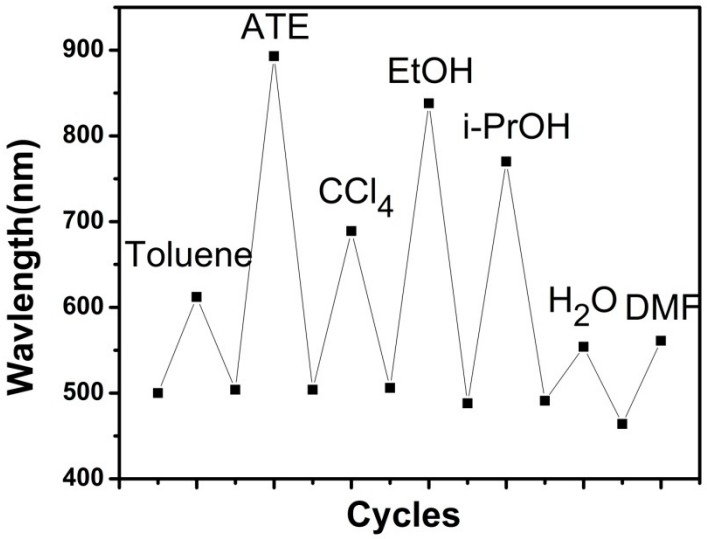

Figure S6. The position of reflection peak of 4 wt % MIL-88B(Fe) photonic film recovering after exposed to various organic vapors

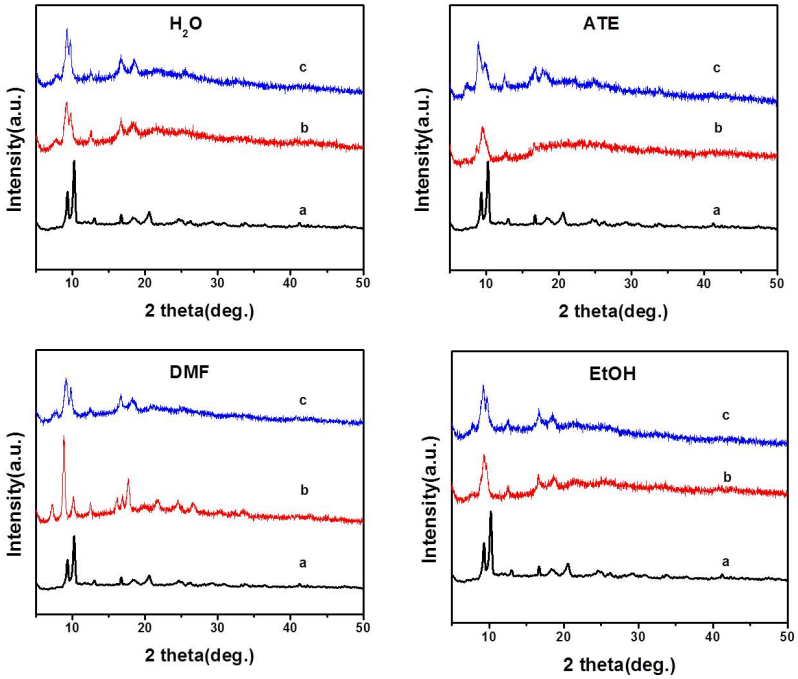

Figure S7. The PXRD patterns of NH_2-MIL-88B when the vapors are adsorbed or removed (a. As-synthesized nanoparticles; b. adsorbed in organic vapors; c. removed organic vapors and recovery in water)

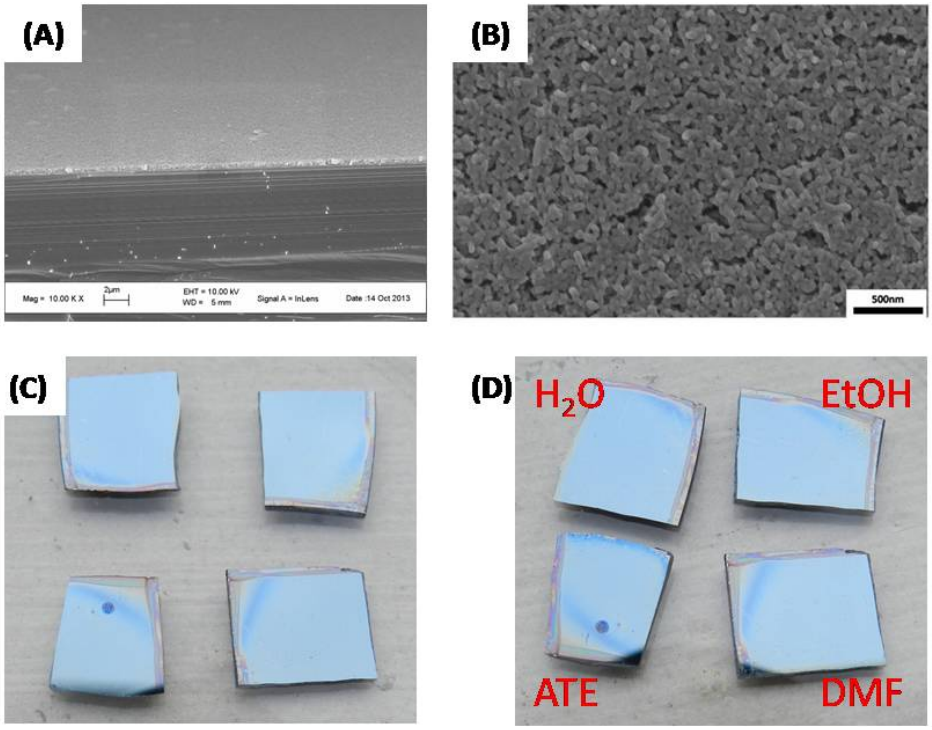

Figure S8. (A, B)SEM images of NH_2-MIL-88B films and photographs of NH_2-MIL-88B films (C)before exposed to organic vapors and (D)after recovering.

Table S1. Refractive index and saturated vapor pressure of the organic solvents at 20 °C.

Analyte	Refractive Index	Saturated Vapor Pressure(mmHg, 20°C)
Acetone	1.48	184
EtOH	1.36	44.6
i-PrOH	1.38	33
CCl_4	1.46	91
Toluene	1.49	22
DMF	1.43	2.7
H_2O	1.33	17.5