Supporting Information

Luminescent metal-organic frameworks with 2-(4-pyridyl)-terephthalic acid ligand for detection of acetone

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# These authors contributed equally to this work.

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Table S1 Selected bond lengths [Å] and bond angles [°] for 1-3

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#1 1/2+x,1/2+y,1/2+z; #2 -x,-y,1-z; #3 1/2+x,1/2+y,1/2+z; #4 1/2+x,1/2-y,1/2+z; #5 1/2+x,1/2+y,1/2+z

**Compound 3**

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<th>Angle (°)</th>
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#1 1/2+x,1/2+y,1/2-z; #2 -x,-y,1-z; #3 -1/2+x,1/2+y,1/2-z; #4 1/2+x,1/2-y,1/2-z; #5 1/2+x,1/2+y,1/2-z;
#6 3/2,x,1/2+y,1/2-z; #7 +x,1+y,z; #7 +x,1+y,z
### Table S2: Detection limits of some MOFs used for fluorescent sensing of acetone.

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<th>Compound</th>
<th>Detection limit</th>
<th>References</th>
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<td>0.0478 vol% (478 ppm)</td>
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<td>[Cdz(L)(Hbptc)$_2$]</td>
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<td>[Cd(Tipb)(mta)]·(DMF)$_x$(H$_2$O)$_y$</td>
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**Fig. S1** IR spectra of 1 (a), 2 (b) and 3 (c).
Fig. S2 PXRD patterns of 1 (a), 2 (b) and 3 (c).

Fig. S3 TG curves for 1 (a), 2 (b) and 3 (c).
Fig. S4 Solid-state fluorescence spectra of H$_2$pta and compounds 1 (a), 2 (b) and 3 (c)

Fig. S5 Fluorescent intensities ($\lambda_{ex} = 277$ nm) of 3 upon the solutions of acetone and different normal solvents (1mL solvents : 1mL acetone)