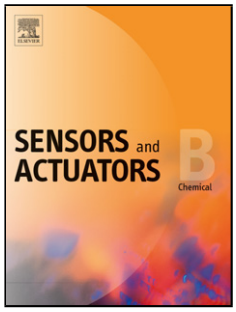

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A facile means for the improvement of sensing properties of metal-organic frameworks through control on the key synthesis variables

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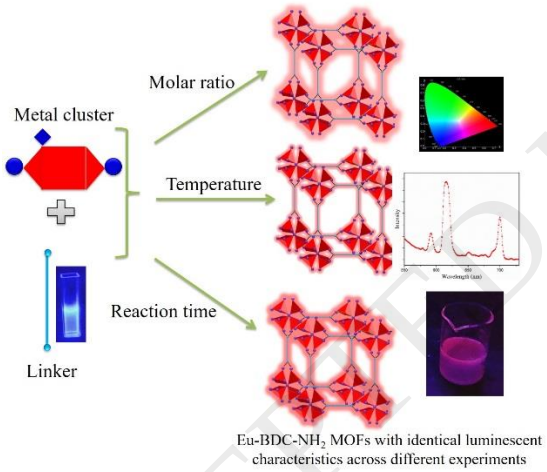
Graphical abstract



Highlights

- Solvothermal assisted synthesis of Eu-BDC-NH_2-MOFs optimized by varying three parameters viz. relative molar ratio of reactants, temperature and time period.
- Enhanced luminescence intensity, high reproducibility, and high stability of the MOFs upto 1 year.
- Significant turn off fluorescence in presence of 1 ppm Hg^{2+} metal ions.
- Distinct turn on fluorescence of MOF-CNCbl nanocomposites in presence of 1 ppm Co^{2+} ions.