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Supplementary Material

A facile building-block synthesis of multifunctional lanthanide MOFs

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^a*Van 't Hoff Institute for Molecular Sciences, University of Amsterdam, Science Park 904, 1098 XH Amsterdam, The Netherlands.*

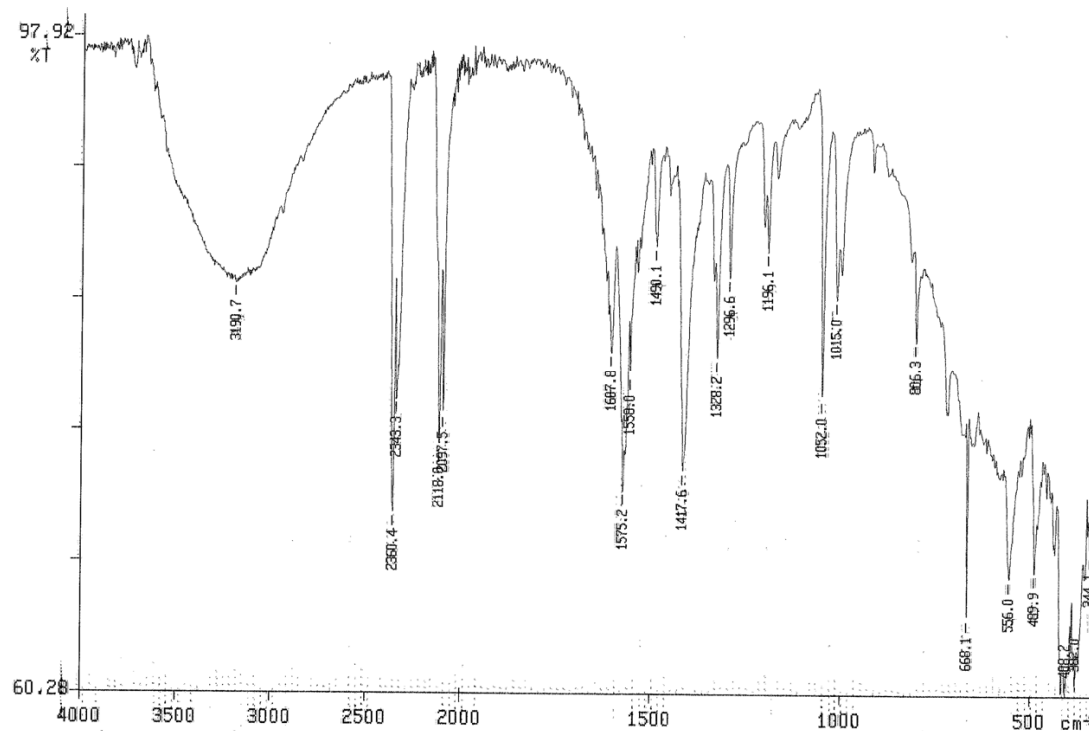
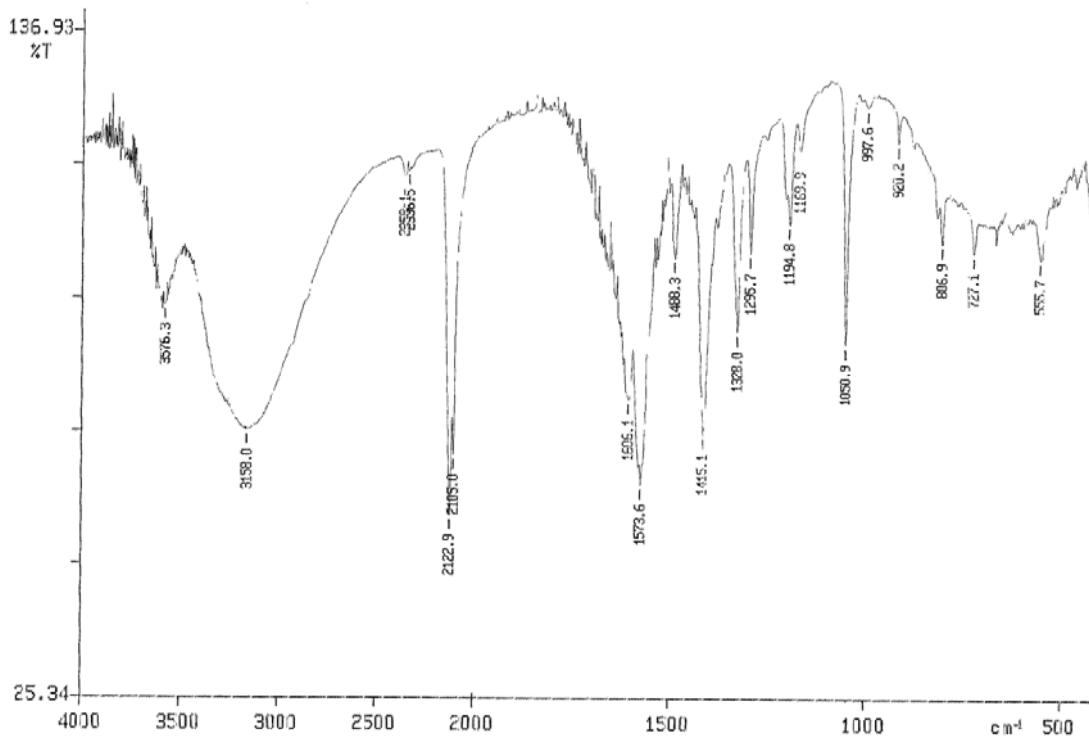
s.grecea@uva.nl (S. Tanase); g.rothenberg@uva.nl (G. Rothenberg)

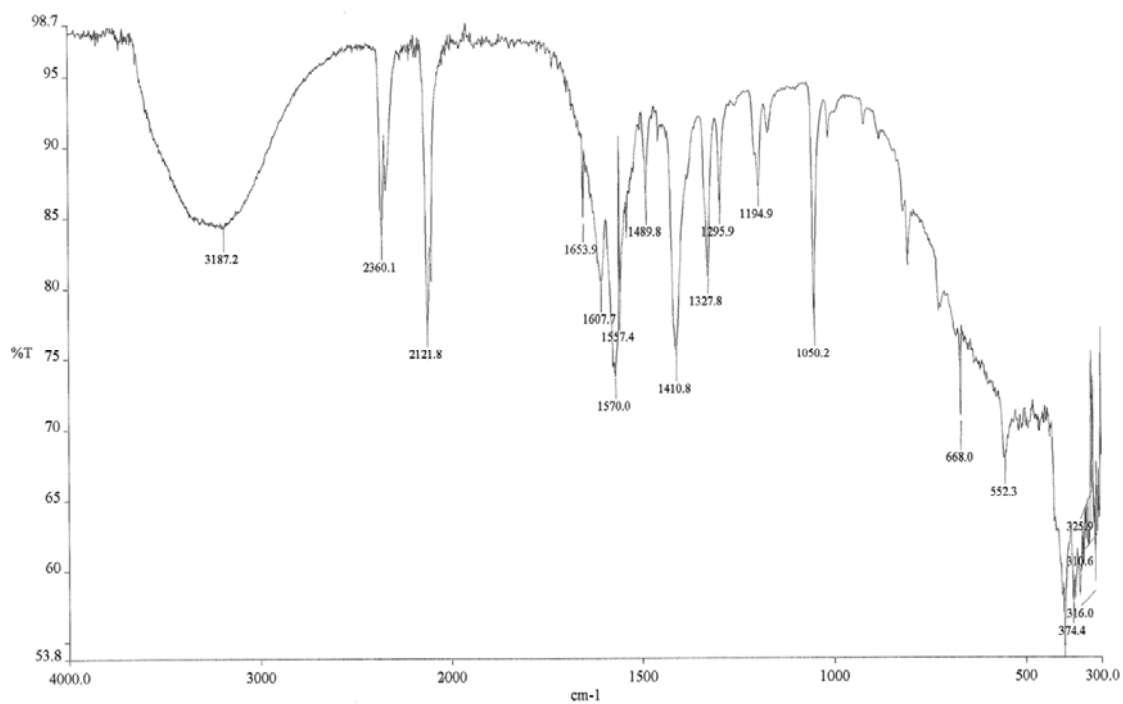
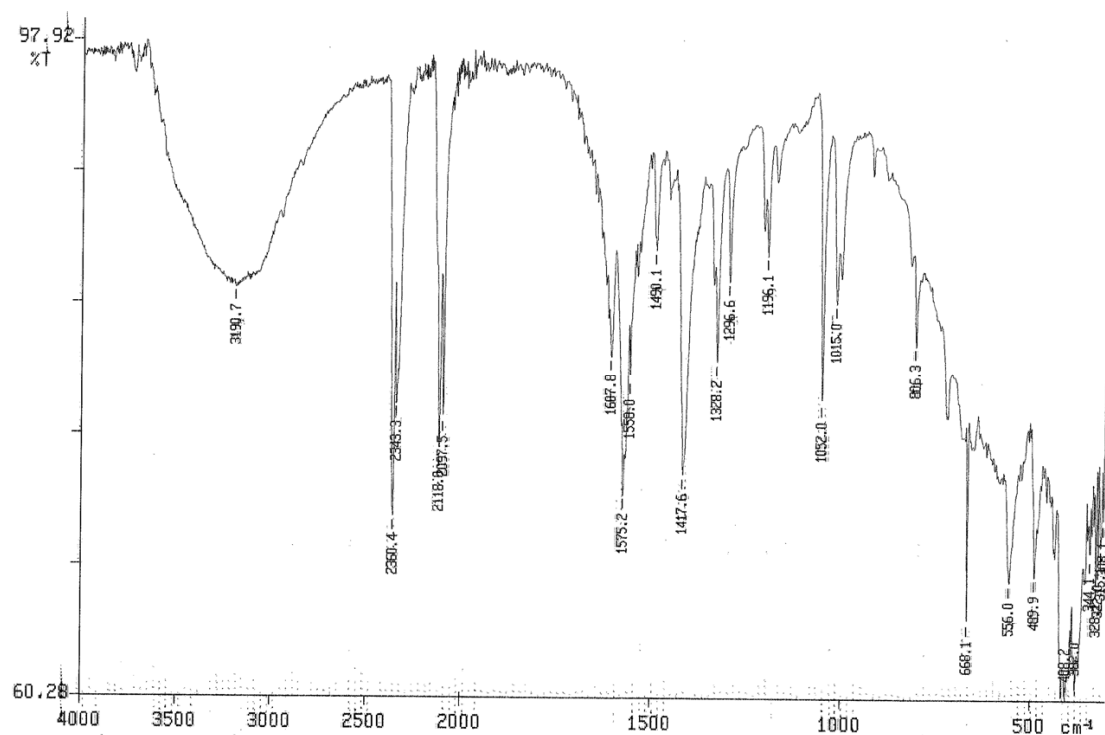
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The supplementary information available: IR and optical spectra, XRD and TGA data, decay time curve of Nd-MOF and magnetic properties of Tb-MOF.





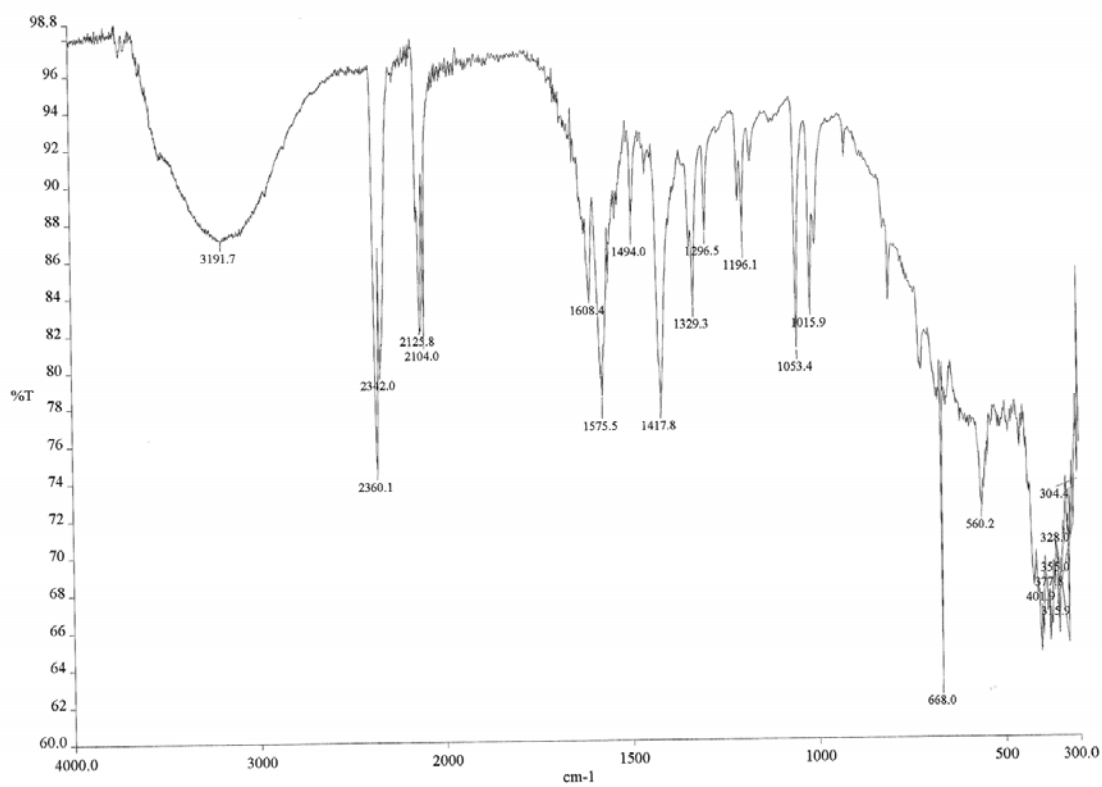


Figure S1. IR spectra of Ln-MOFs (from top to bottom: Nd, Eu, Gd, Tb and Er).

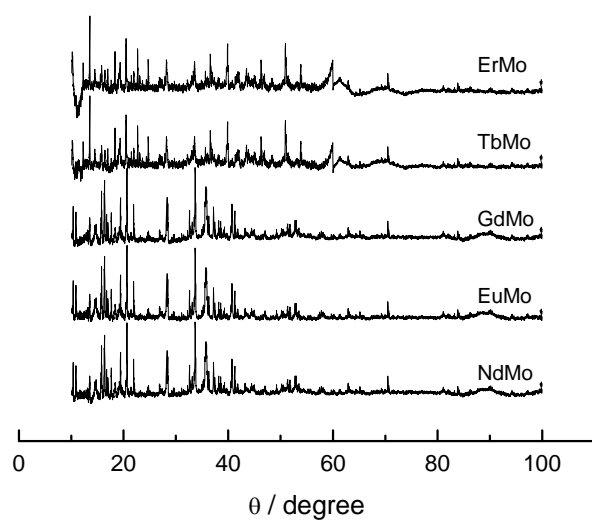


Figure S2. XRD powder diffraction patterns for Ln-MOFs.

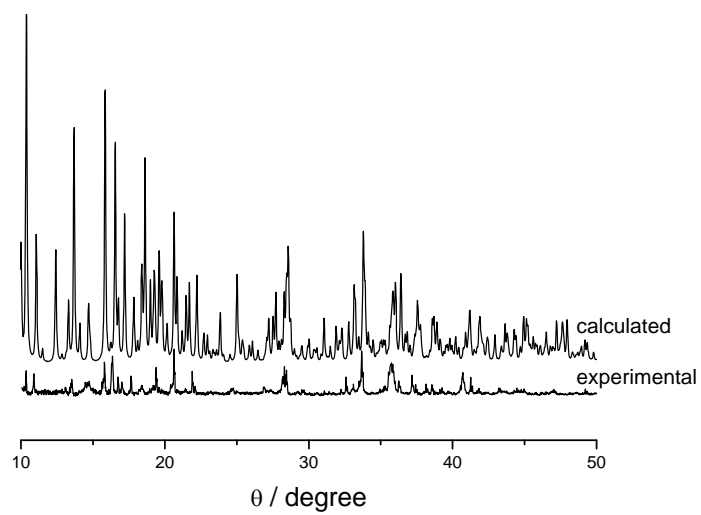


Figure S3. XRD powder diffraction patterns and the simulated pattern of Eu-MOF.

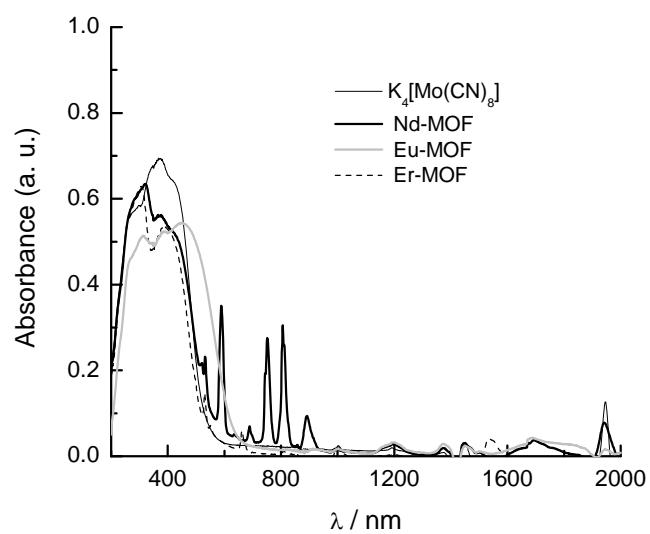


Figure S4. Absorption spectra collected at room temperature for the compounds $K_4[Mo(CN)_8]$, Nd, Eu and Er MOFs.

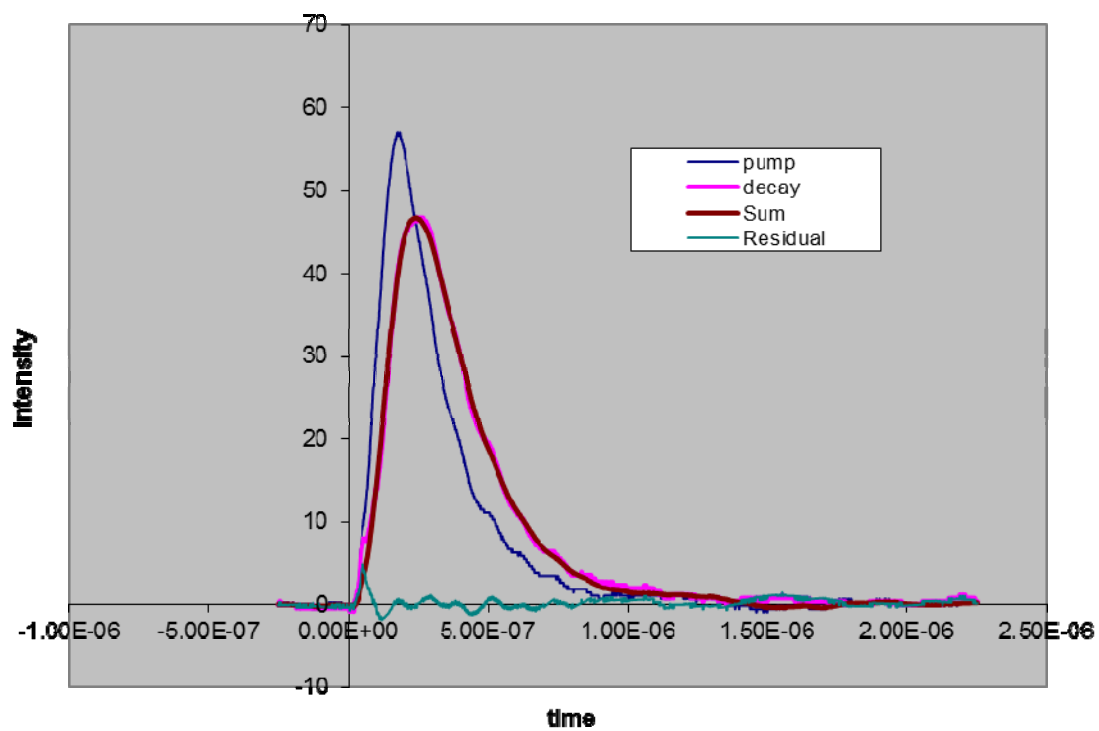


Figure S5. Decay time curve of Nd-MOF.

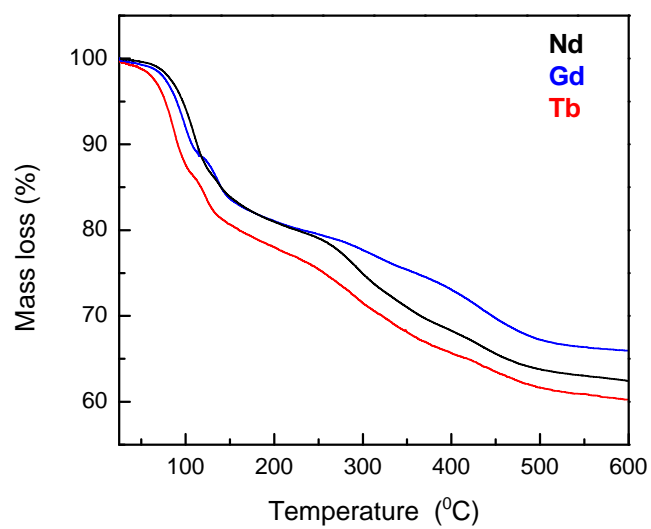


Figure S6. TGA curves of Nd, Gd and Tb MOFs.

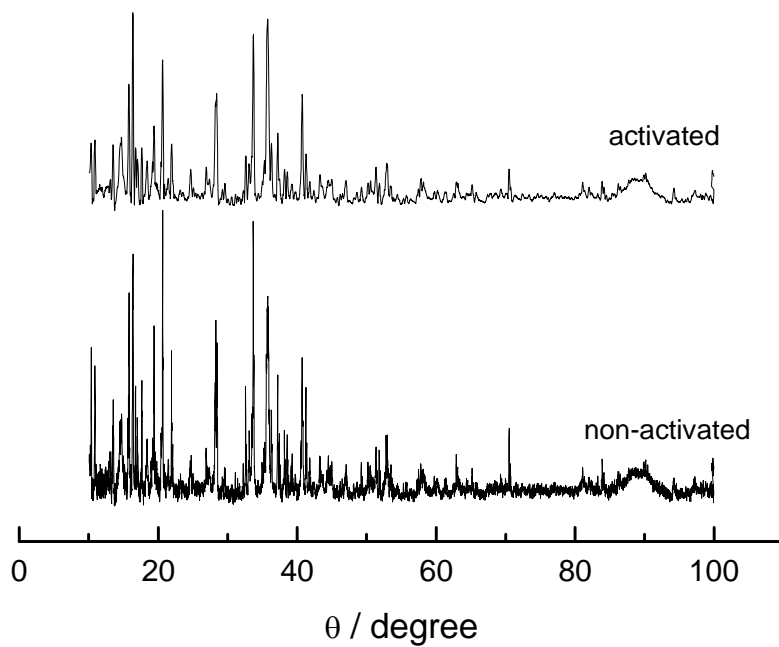


Figure S7. PXRD pattern of compound Eu-MOF.

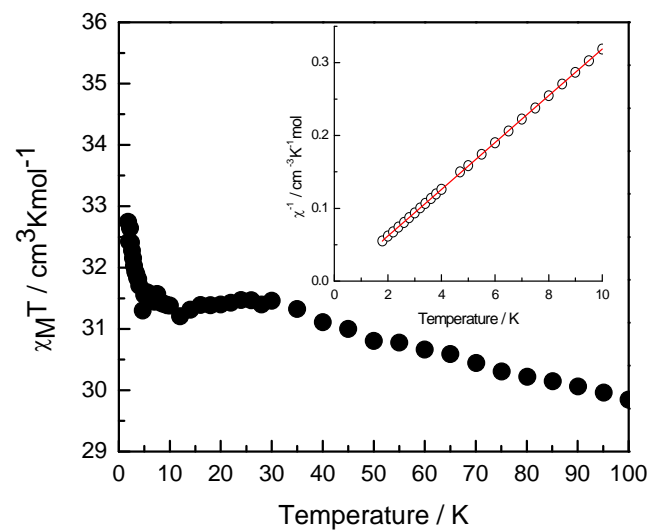


Figure S8. Temperature dependence of the $\chi_M T$ recorded at 0.1 T for MOF4 in the temperature range 2 to 100 K. Inset: The Curie-Weiss fit between 1.8 and 10 K giving the parameters $C = 31.10 \text{ cm}^3 \text{K mol}^{-1}$ and $\theta = 0.1 \text{ K}$.