

Supporting Information for:

**Structural Diversity of Four Lanthanide Metal-Organic Frameworks based on
2,6-Naphthalenedicarboxylate: Synthesis, Structures and Photoluminescent Properties**

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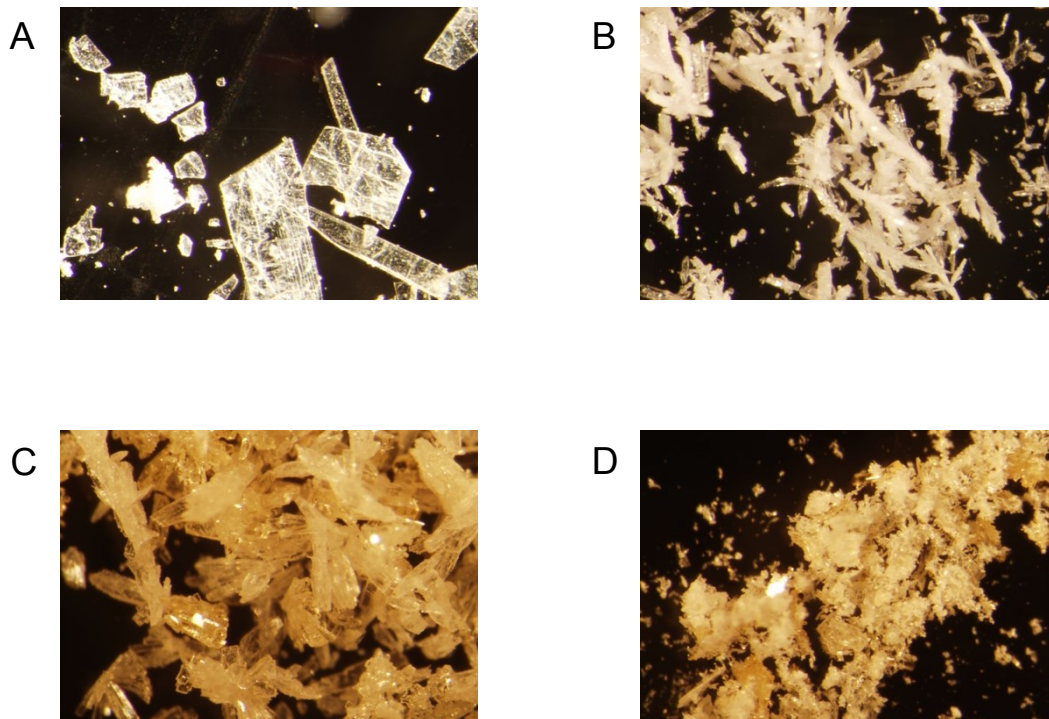


Figure S1. Optical micrographs of the powders of A) SLUG-49 (La); B) SLUG-50 (Nd);
C) SLUG-51 (Eu); D) SLUG-52 (Gd).

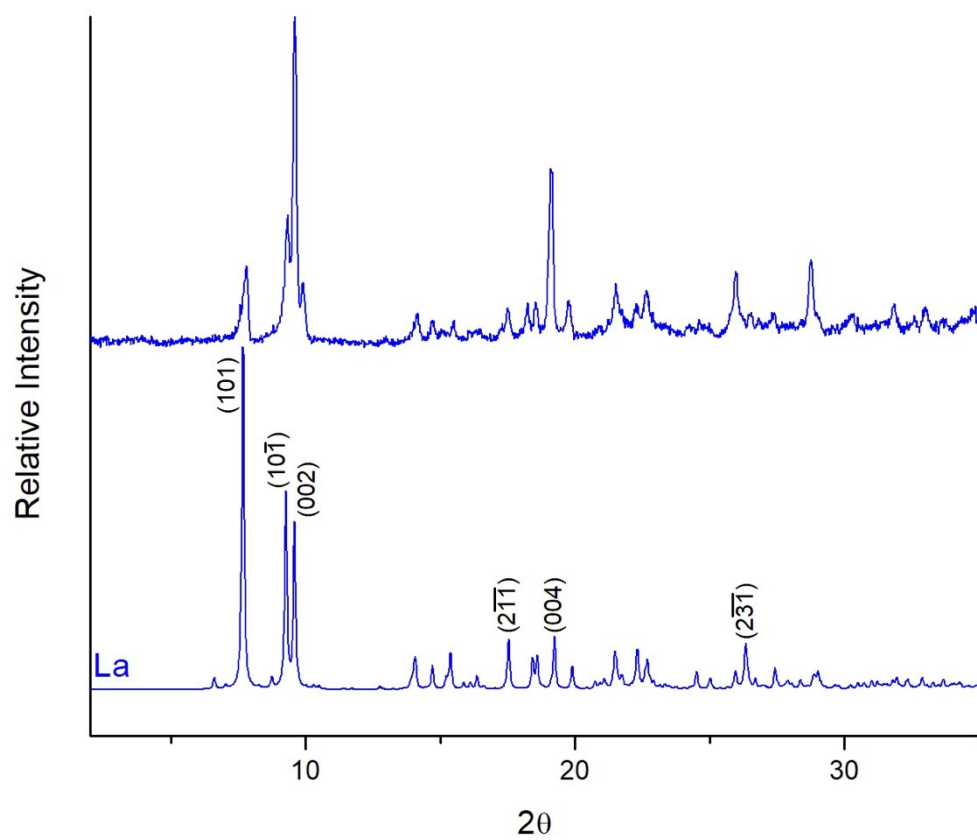


Figure S2. Comparison of the theoretical PXRD of SLUG-49 (La) (bottom) with as-synthesized (top).

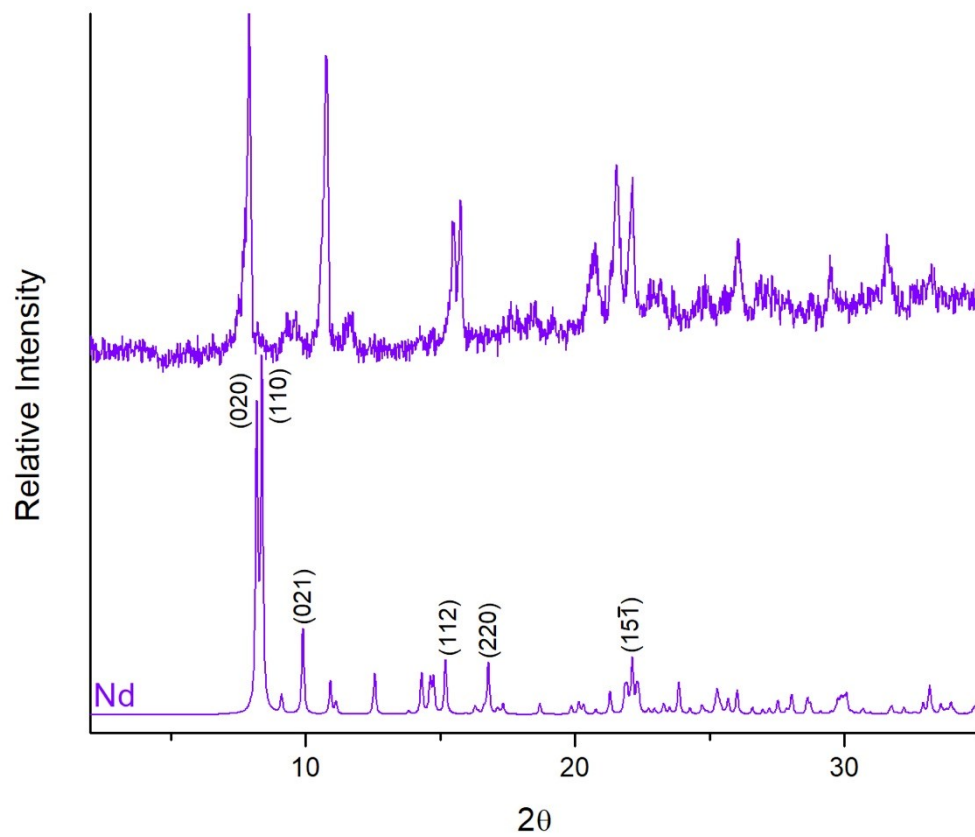


Figure S3. Comparison of the theoretical PXRD of SLUG-50 (Nd) (bottom) with as-synthesized (top).

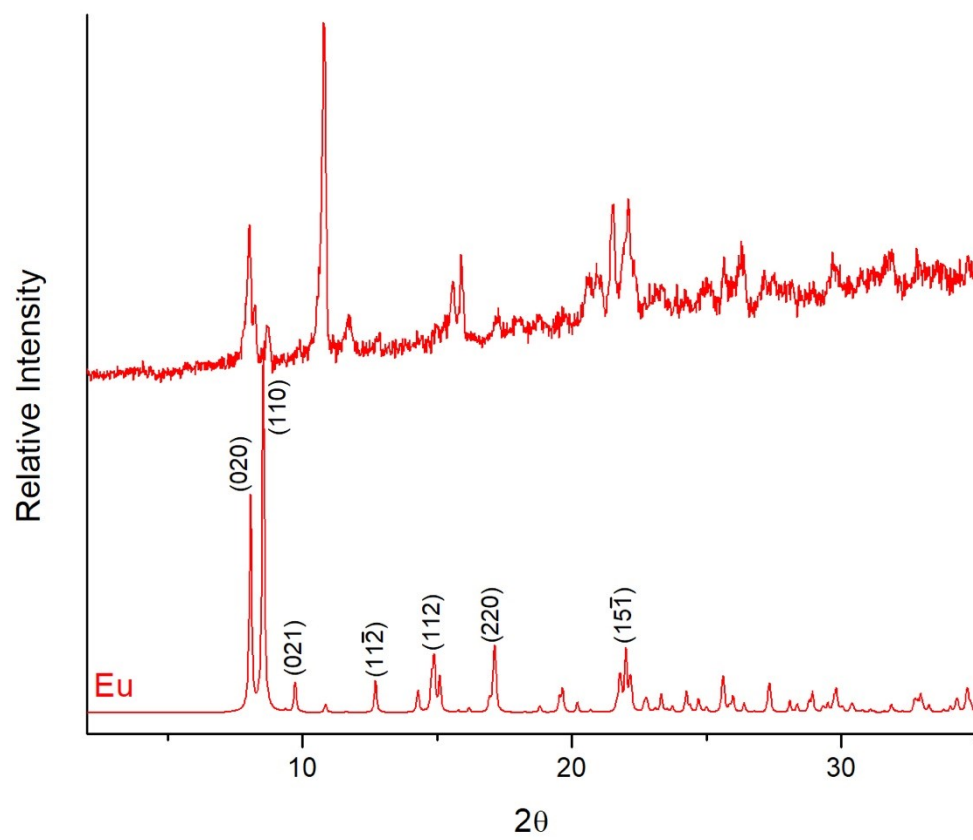


Figure S4. Comparison of the theoretical PXRD of SLUG-51 (Eu) (bottom) with as-synthesized (top).

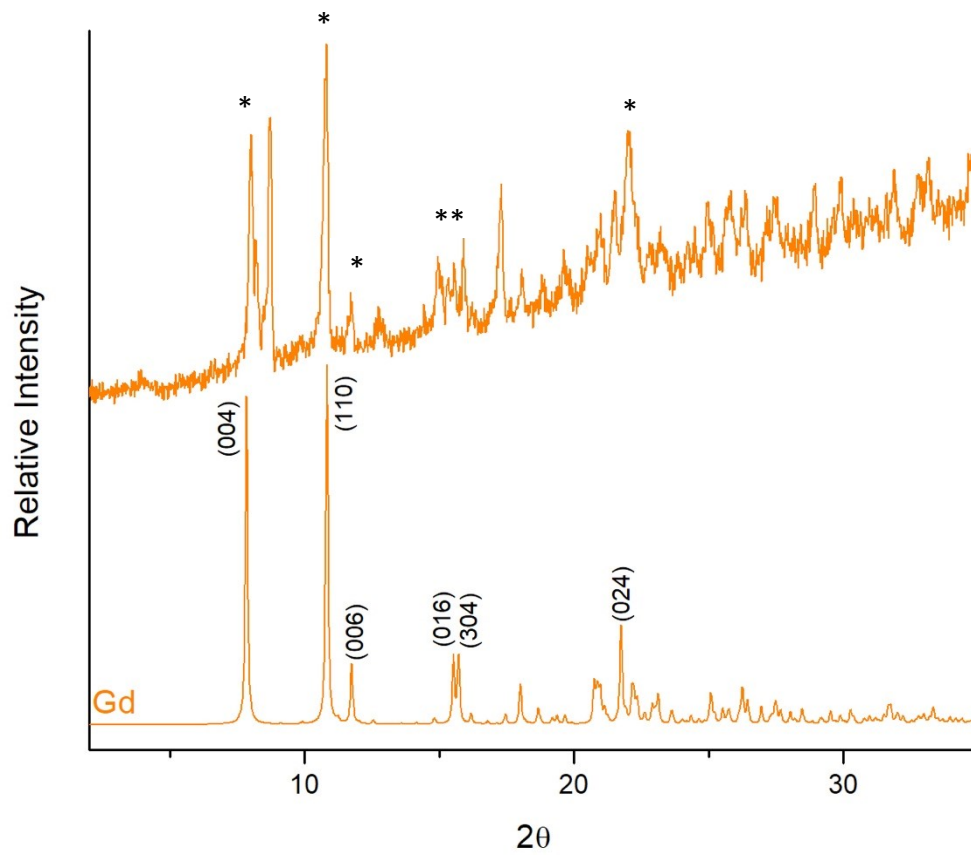


Figure S5. Comparison of the theoretical PXRD of SLUG-52 (Gd) (bottom, asterisks) with as-synthesized (top). An additional as-yet unknown phase is present in the as-synthesized sample.

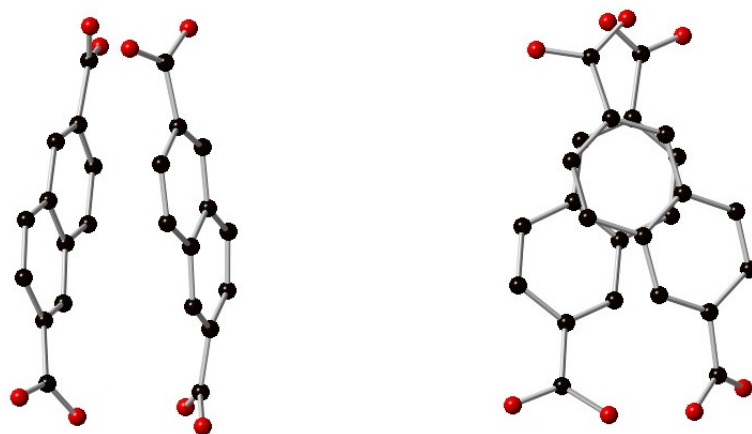


Figure S6. Observed π -stacking of NDC in SLUG-50 (Nd) and SLUG-51 (Eu).

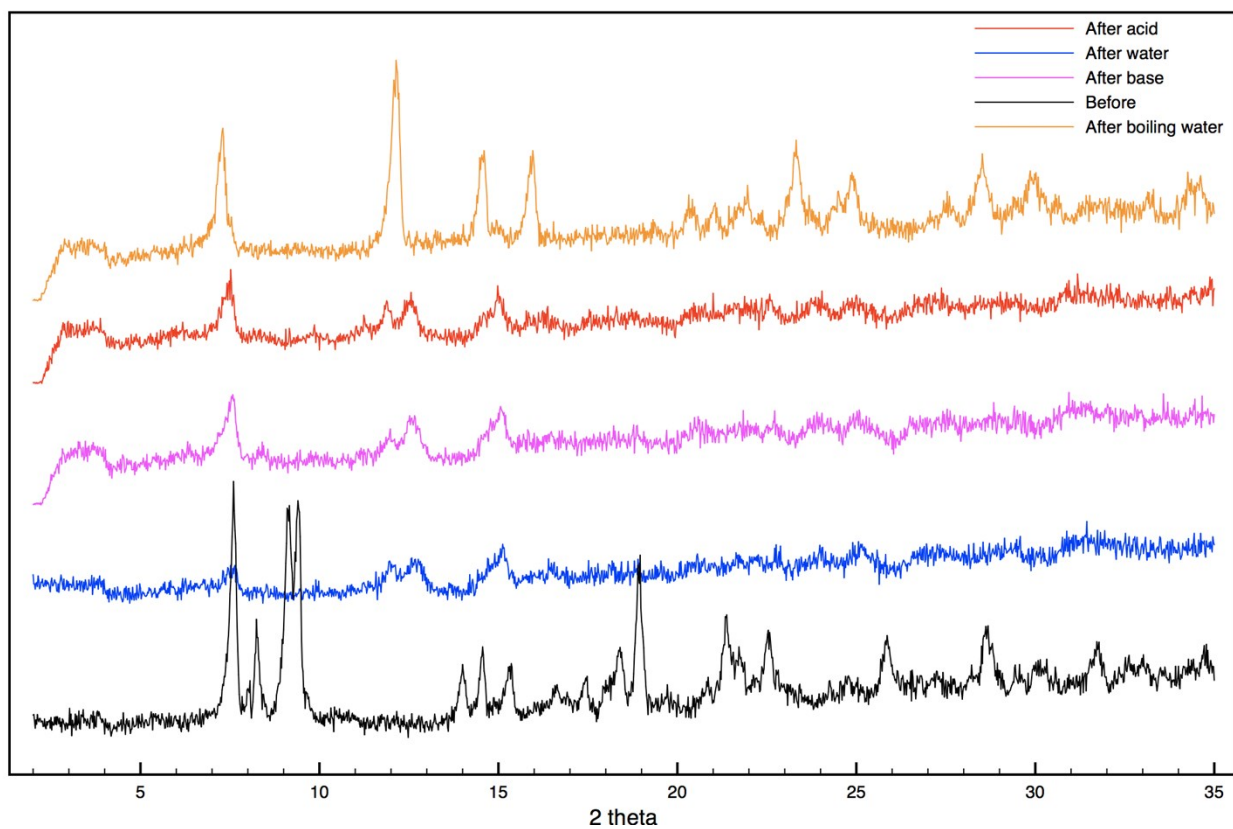


Figure S7. PXRD of SLUG-50 (Nd) (bottom) as an example after treatment in various aqueous conditions (acidic pH was 4.6 and basic pH was 9.6); all were static for 2 h.

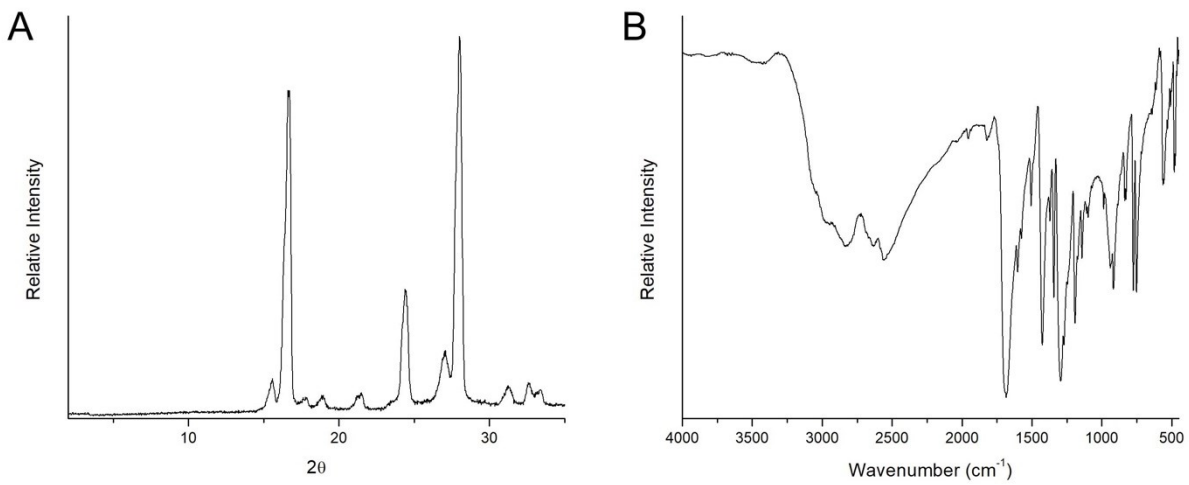


Figure S8. PXRD (A) and FTIR (B) of 2,6-naphthalenedicarboxylic acid.

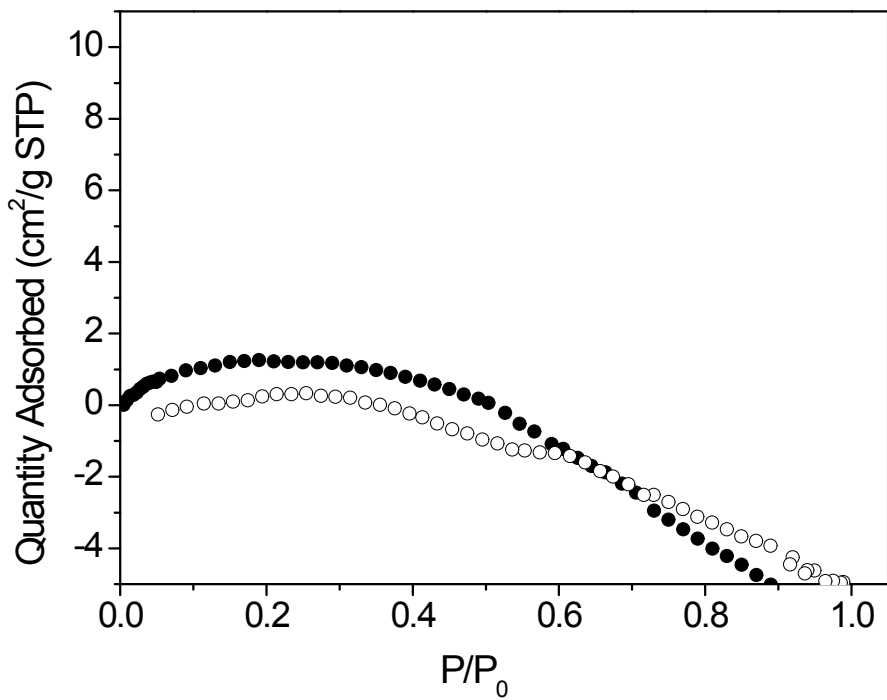


Figure S9. Physiosorption analysis of SLUG-51(Eu).

Table S1. Void volumes calculated using PLATON

	SLUG-49	SLUG-50	SLUG-51	SLUG-52
Total unit cell volume	3403.54 Å ³	4263.68 Å ³	4238.51 Å ³	7679.98 Å ³
Volume occupied	2435.91 Å ³ , 71.57%	2981.17 Å ³ , 69.92%	2913.98 Å ³ , 68.75%	5361.39 Å ³ , 69.81%
Void volume	967.63 Å ³ , 28.43%	1282.51 Å ³ , 30.08%	1324.53 Å ³ , 31.25%	2318.59 Å ³ , 30.19%