**SUPPORTING INFORMATION**

Microwave‑assisted synthesis of lanthanide coordination polymers with 2‑bromobenzoic acid as ligand from hexa‑lanthanide molecular precursors.

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**Figure S1.** Experimental X‑ray powder diffraction pattern of [Tb(2‑bb)3]∞ (top) and calculated from the crystal structure X‑ray powder diffraction diagram of [Dy(2‑bb)3]∞ (bottom).



**Figure S2.** IR spectrum of [Tb(2‑bb)3]∞.

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| **Table S1.** Metallic relative contents in [Y*x*Tb1‑*x*(2‑bb)3]∞ and [Eu*x*Tb1‑*x*(2‑bb)3]∞ with 0.1 ≤ *x* ≤ 0.5. |
|  | [Y*x*Tb1‑*x*(2‑bb)3]∞ |  |
| *x* | Y3+ (%) | Tb3+ (%) |
| 0.1 | 9(2) | 91(2) |
| 0.15 | 16(2) | 84(2) |
| 0.3 | 28(2) | 72(2) |
| 0.5 | 56(2) | 44(2) |
|  | [Eu*x*Tb1‑*x*(2‑bb)3]∞ |  |
| *x* | Eu3+ (%) | Tb3+ (%) |
| 0.1 | 8(2) | 92(2) |
| 0.15 | 12(2) | 88(2) |
| 0.3 | 28(2) | 72(2) |
| 0.5 | 48(2) | 52(2) |



**Figure S3.** Room temperature solid state emission spectra of [Y*x*Tb1‑*x*(2‑bb)3]∞ with 0.1 ≤ *x* ≤ 0.5 (exc = 295 nm).