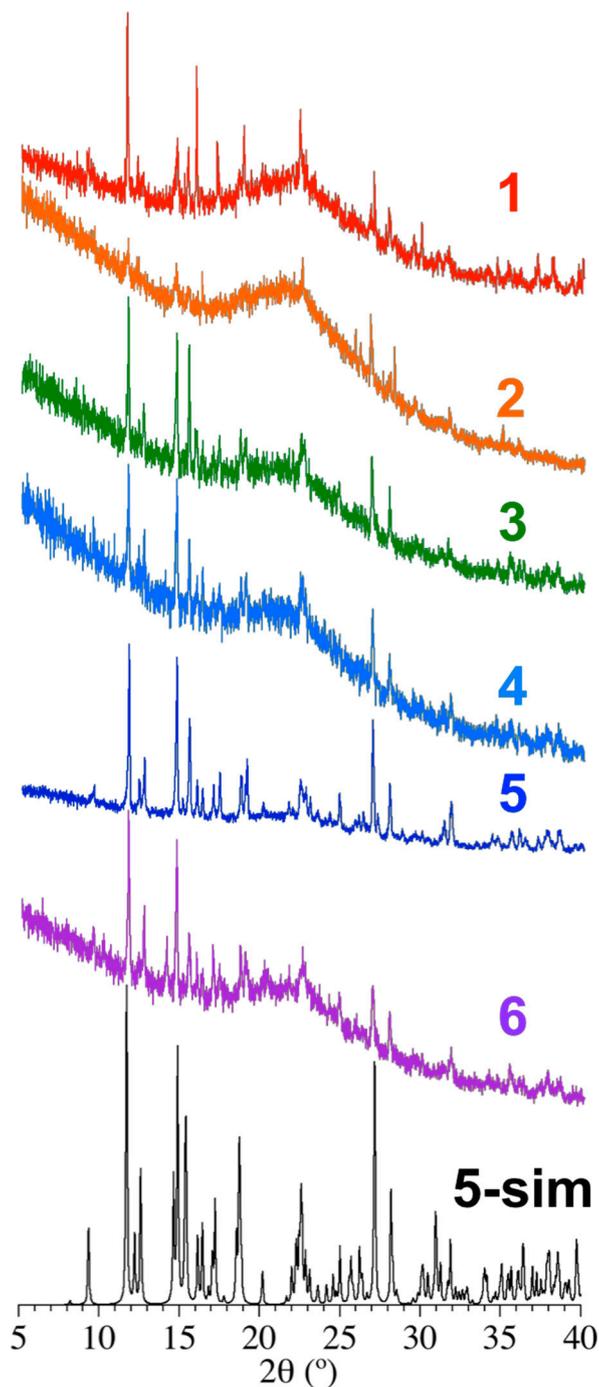


## Supplementary Materials: A Family of Lanthanoid Dimers with Nitroanilato Bridges

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The powder X-ray diffractogram of compounds 1–6 shows that they are all isostructural (Figure S1). The small amount of compounds 1–4 precluded us to obtain well defined powder X-ray diffractograms. Albeit, the isostructurality observed in the single crystal X-ray diffraction of the six compounds is confirmed by the powder X-ray diffractograms.



**Figure S1.** Powder X-ray diffractograms of compounds 1–6 compared with the simulated one from the single crystal X-ray structure of compound 5.

**Table S1.** Intermolecular H-bonds with O...O distances (in Å) below 2.9 Å involving at least one coordinated or crystallization water molecule for compounds  $[\text{Ln}_2(\text{C}_6\text{O}_4(\text{NO}_2)_2)_3(\text{H}_2\text{O})_{10}]\cdot 6\text{H}_2\text{O}$  with Ln = Sm (1), Gd (2), Tb (3), Dy (4) and Ho (5).

Sm (1)		Gd (2)		Tb (3)		Dy (4)		Ho (5)	
Atoms	O...O	Atoms	O...O	Atoms	O...O	Atoms	O...O	Atoms	O...O
O11W–O5	2.748(9)	O1W–O1B	2.713(11)	O11W–O2W	2.641(7)	O4AW–O4A	2.710(9)	O12W–O2W	2.651(7)
O1W–O12W	2.761(15)	O4W–O4B	2.782(9)	O13W–O3W	2.715(9)	O3AW–O1B	2.771(8)	O11W–O4W	2.702(9)
O11W–O4A	2.820(13)	O11W–O3W	2.791(11)	O3W–O12W	2.732(9)	O1W–O1AW	2.773(9)	O4W–O10W	2.722(10)
O11W–O11A	2.838(10)	O10W–O2W	2.80(2)	O12W–O6	2.774(9)	O5AW–O2W	2.798(12)	O10W–O5	2.778(10)
O13W–O11B	2.846(10)	O11W–O1A	2.835(8)	O12W–O4W	2.790(11)	O1W–O4B	2.841(8)	O12W–O5W	2.80(2)
O1W–O5	2.863(11)	O12W–O11B	2.850(12)	O11W–O5W	2.796(15)	O3W–O11B	2.850(9)	O5W–O1W	2.845(14)
O21W–O1W	2.90(3)	O11W–O11A	2.855(8)	O1W–O5W	2.810(12)	O1W–O11A	2.852(6)	O10W–O4A	2.847(10)
		O12W–O4A	2.862(10)	O12W–O1B	2.841(8)	O3W–O1A	2.866(9)	O11W–O11B	2.850(12)
		O2W–O6	2.876(9)	O13W–O11A	2.842(11)	O5AW–O5	2.872(8)	O10W–O11A	2.859(8)
				O1W–O13	2.848(6)	O2W–O4A	2.893(8)	O5W–O5	2.873(10)
				O13W–O4B	2.854(10)			O1W–O13	2.876(6)
				O12W–O11B	2.857(8)				
				O5W–O6	2.875(9)				