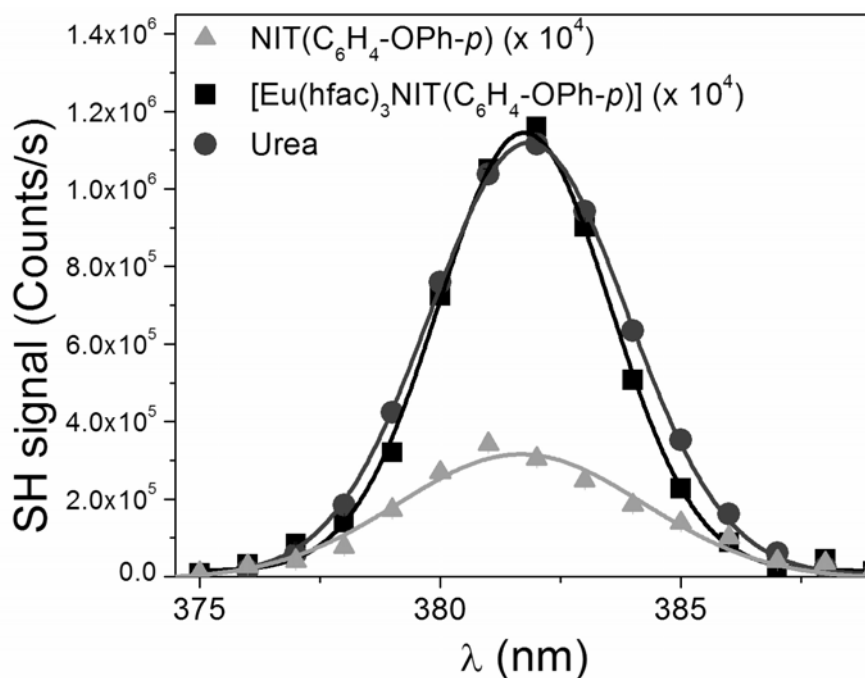


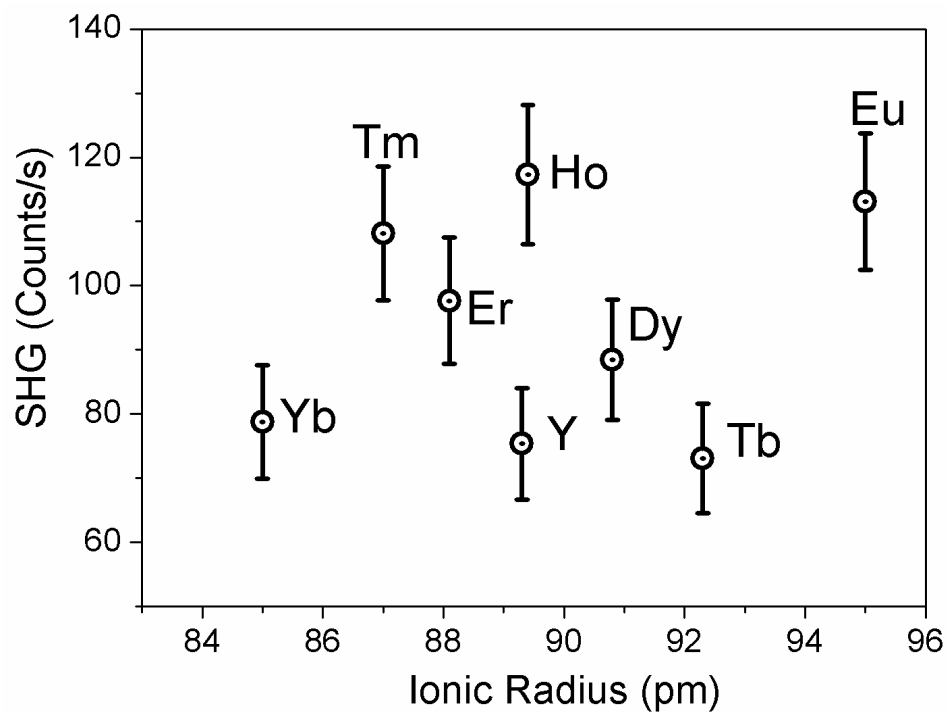
## Supplementary Material to:

### Evidences of intermolecular $\pi$ -Stacking Enhancement of Second-Harmonic Generation in a Family of Single Chain Magnets

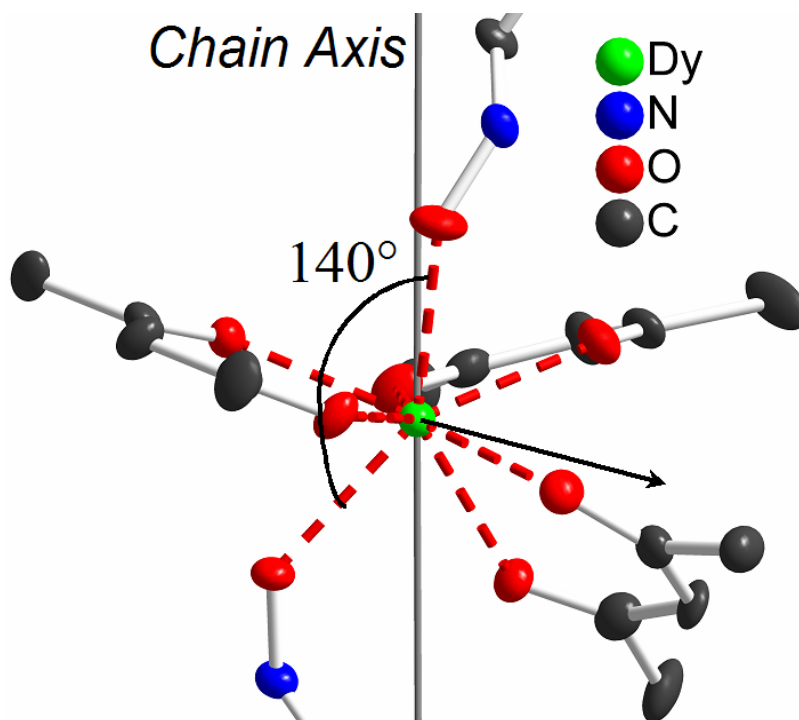
Lapo Bogani,<sup>\*a,b</sup> Lucia Cavigli,<sup>a,b</sup> Kevin Bernot,<sup>a,c</sup> Roberta Sessoli,<sup>\*a</sup> Massimo Gurioli,<sup>b</sup> and Dante Gatteschi



Supplementary Information 1 Spectral dispersion of the Fundamental and SHG beams



**Supplementary Information 2** SHG Intensity as a function of the ionic radius of the rare-earths.



**Supplementary Information 3** Coordination geometry around the rare-earth metal centre. The Radical oxygen –Metal– Radical oxygen angle is reported. The black arrow represents the direction of an hypothetical *cis* coordination of the radicals.