

## Supplementary Information

### Rare Earth-Indomethacinate Complexes with Heterocyclic Ligands: Synthesis and Photoluminescence Properties

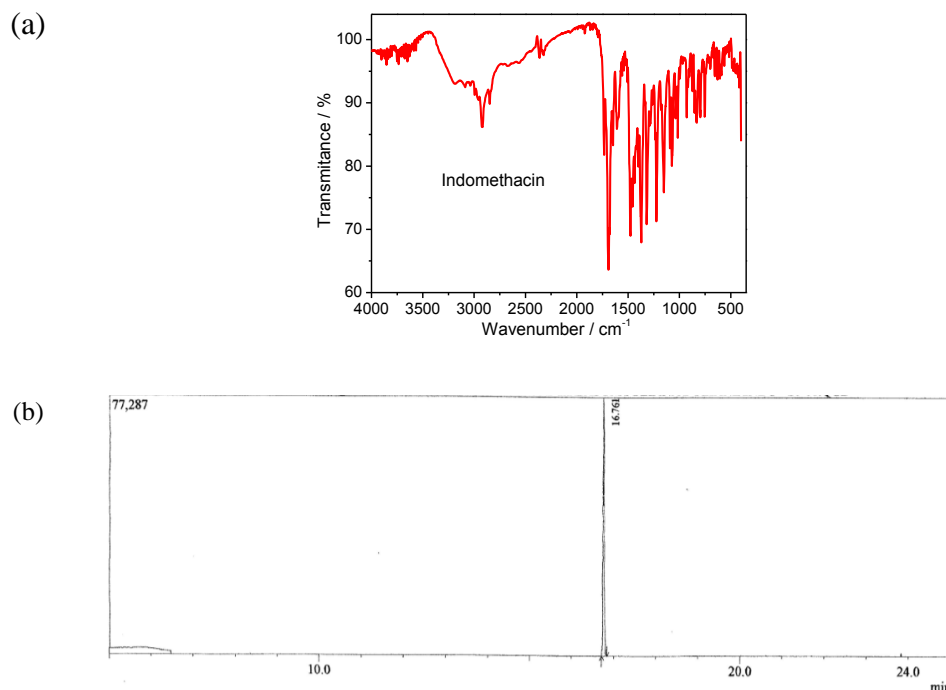
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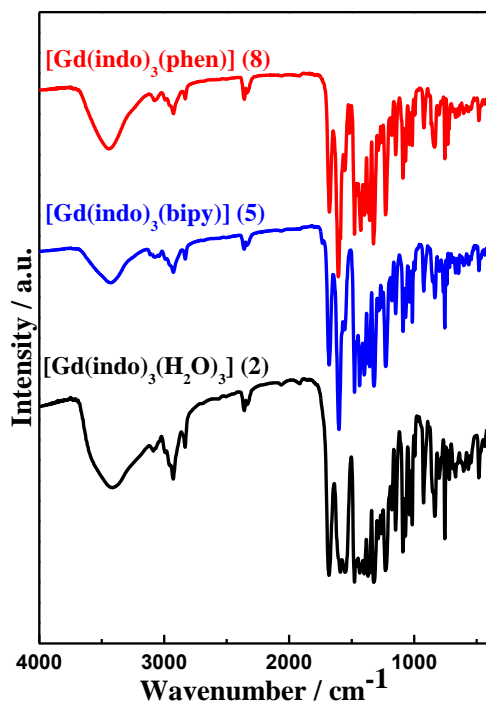
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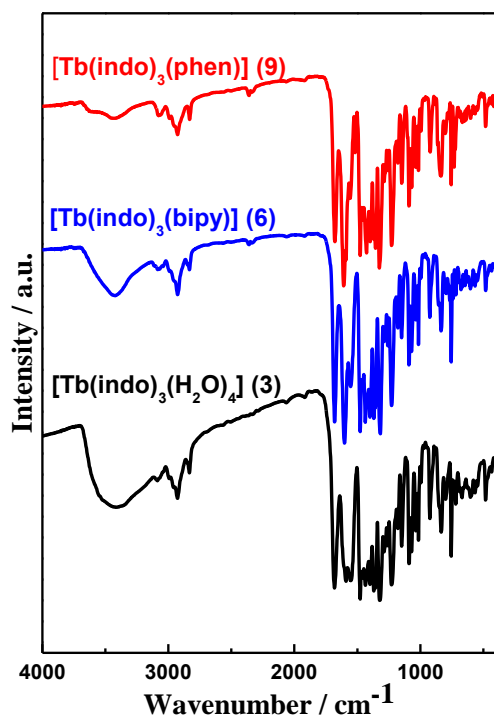


**Figure S1.** (a) FTIR absorption spectrum of the indomethacin ligand extracted from INDOCID drug, recorded in the range of 4000-400  $\text{cm}^{-1}$  in KBr pellets and (b) chromatographic data for indomethacin ligand extracted from the INDOCID<sup>®</sup> drug using ethyl acetate as solvent.

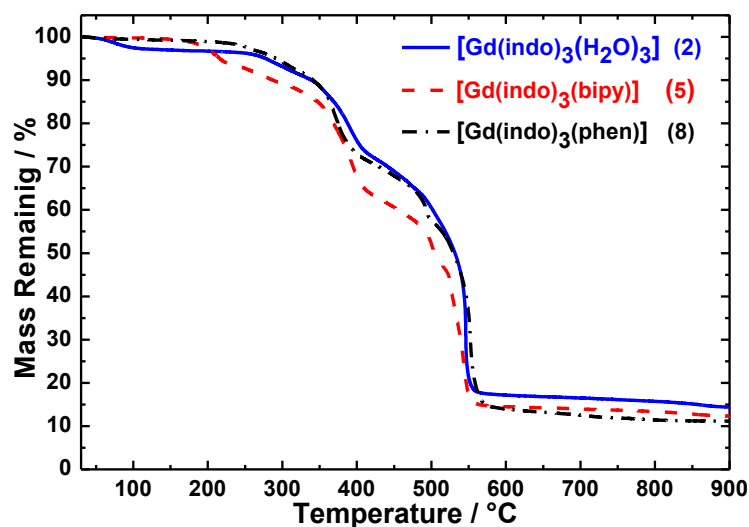
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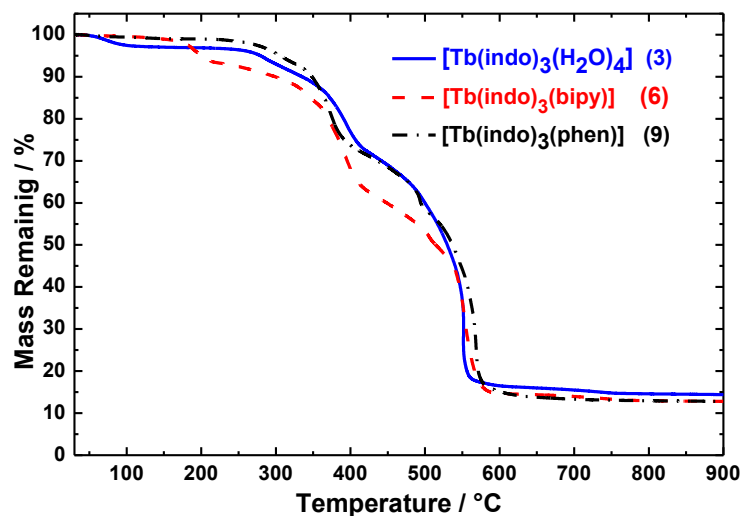
**Figure S2.** FTIR absorption spectra of the Gd<sup>3+</sup>-complexes (2, 5 and 8) recorded in the range of 4000-400 cm<sup>-1</sup> in KBr pellets.



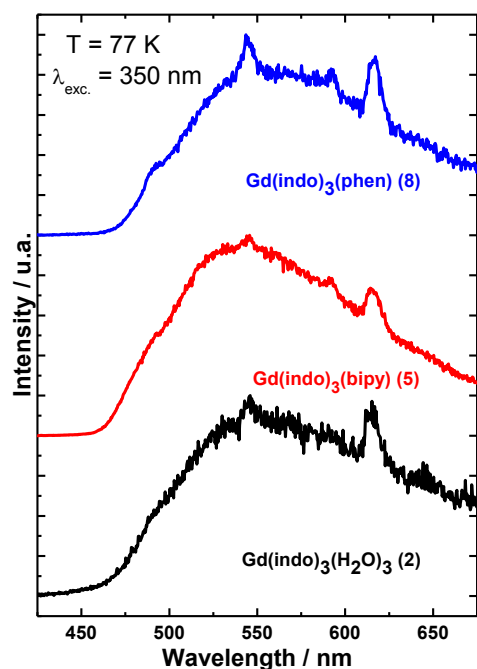
**Figure S3.** FTIR absorption spectra of the Tb<sup>3+</sup>-complexes (3, 6 and 9) recorded in the range of 4000-400 cm<sup>-1</sup> in KBr pellets.



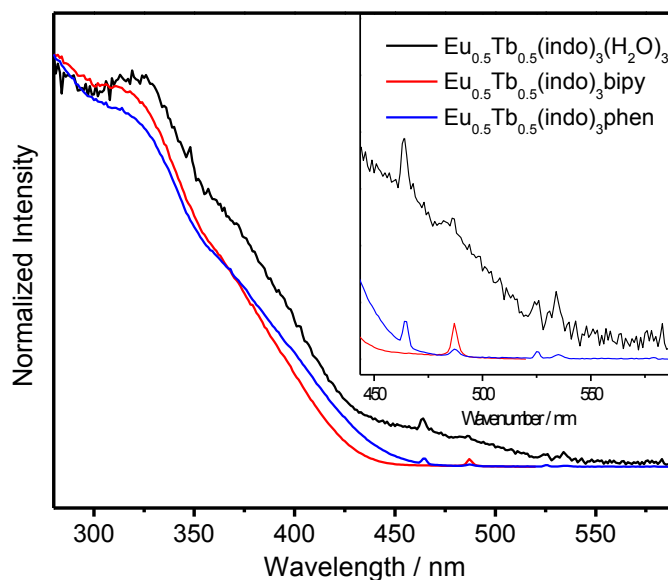
**Figure S4.** TGA curves for the  $\text{Gd}^{3+}$ -complexes (2, 5 and 8) recorded in the interval 25-900 °C, using dynamic synthetic air atmosphere ( $50 \text{ mL min}^{-1}$ ) and a heating rate of  $10 \text{ }^\circ\text{C min}^{-1}$ .



**Figure S5.** TGA curves for the  $\text{Tb}^{3+}$ -complexes (3, 6 and 9) recorded in the interval 25-900 °C, using dynamic synthetic air atmosphere ( $50 \text{ mL min}^{-1}$ ) and a heating rate of  $10 \text{ }^\circ\text{C min}^{-1}$ .



**Figure S6.** Time-resolved phosphorescence spectra of the  $Gd^{3+}$ -complexes (**2**, **5** and **8**), in solid state, recorded at liquid nitrogen temperature in spectral range 420-700 nm, under excitation at 350 nm with time delay of 0.04 ms.



**Figure S7.** Excitation spectra for solid solutions  $Eu_{0.5}Tb_{0.5}(indo)_3(H_2O)_3$  and  $Eu_{0.5}Tb_{0.5}(indo)_3(L)$ , where L: phen or bipy, recorded at 77 K under emission monitored at 679 nm.