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Intended Tb <sup>3+</sup> Dopant Concentration in Gd <sub>1-x</sub> Tb <sub>x</sub> OCI	x = 0.020	x = 0.050	x = 0.100	x = 0.150	x = 0.200	x = 0.250	x = 0.300
Actual Tb <sup>3+</sup> Dopant Concentration in Gd <sub>1-x</sub> Tb <sub>x</sub> OCl	x = 0.018	x = 0.042	x = 0.084	x = 0.131	x = 0.171	x = 0.216	x = 0.234

**Table S1.** The top row shows the intended  $Tb^{3+}$  dopant concentration for  $Gd_{1-x}Tb_xOCI$ , whereas the bottom row shows the actual dopant concentration as determined by inductively coupled plasma mass spectrometry.

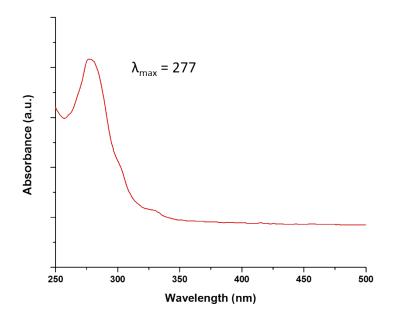


Figure S1. Optical absorption spectrum of  $Gd_{0.985}Tb_{0.015}OCI$  nanocrystals dispersed in hexanes.