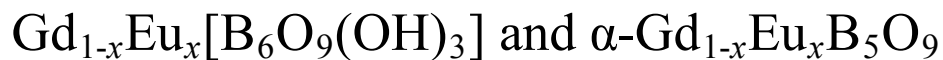


Electronic Supplementary Information for

## Syntheses and Luminescence of Complete Solid Solutions



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(8623)65105065, Fax: (8623)65105065.

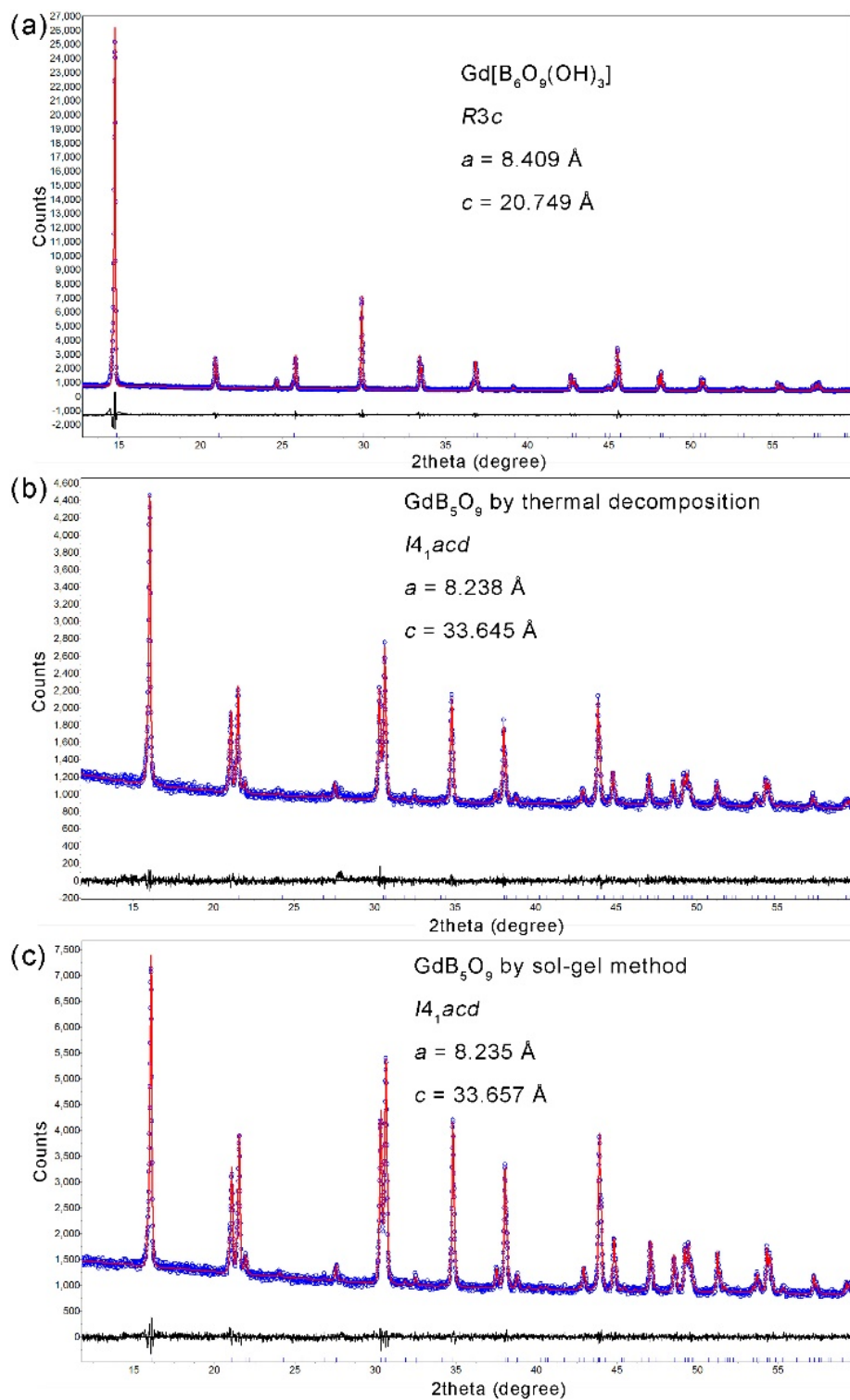


Figure S1. Since the powder XRD for all complete solid solutions are generally the same. We performed the Le Bail fitting for samples of  $\text{Gd}[\text{B}_6\text{O}_9(\text{OH})_3]$ ,  $\alpha\text{-GdB}_5\text{O}_9$  to show the purity. The circles  $\circ$  represents the observed data and the red solid line is the calculated pattern; the marks below the diffraction patterns are the expected reflection positions and, the difference curve (in black) is also shown below the diffraction curves. Cell parameters are shown in Figure, which were obtained by Le Bail fitting in TOPAS.

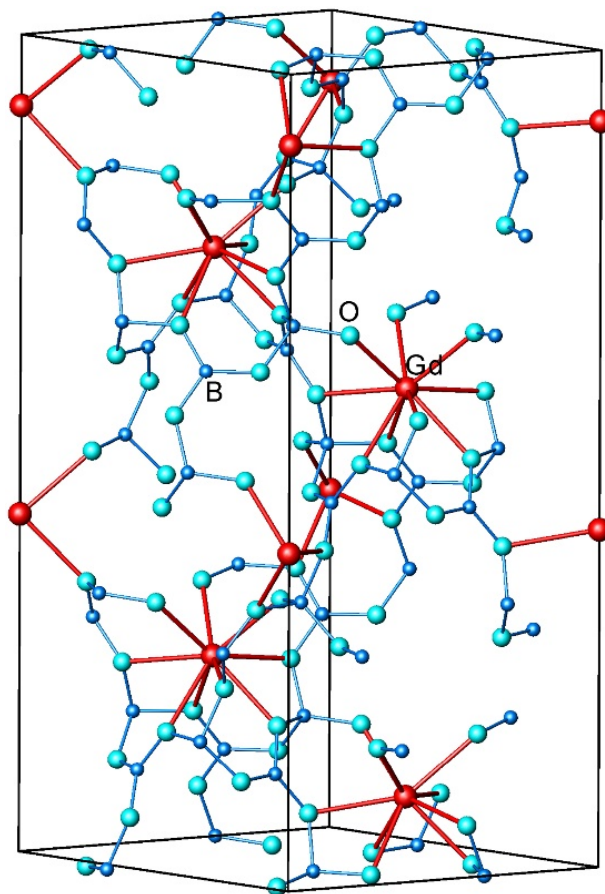


Figure S2. A crystal structure view of  $\text{Gd}[\text{B}_6\text{O}_9(\text{OH})_3]$ . The red spheres are  $\text{Gd}^{3+}$ , which are surrounded by 9 oxygen atoms in a close-to-centrosymmetric environment: Gd-O2, 2.387Å; Gd-O3, 2.392Å; Gd-O4, 2.470Å.