Electronic supplementary information (ESI)

An anomalous downsizing of glycothermally-synthesized YBO$_3$ crystals by Ce$^{3+}$ doping

Ayano Tani, Hiroki Hara, Satoru Takeshita,* and Tetsuhiko Isobe*

Department of Applied Chemistry, Faculty of Science and Technology, Keio University, 3-14-1 Hiyoshi, Kohoku-ku, Yokohama 223-8522, Japan

Additional figures

**Fig. S1.** Change in the actual RE concentration of RE$^{3+}$-doped YBO$_3$ samples with ionic radius of doped RE$^{3+}$ ion.
**Fig. S2.** Changes in crystallite sizes perpendicular to (100) and (002) of RE$^{3+}$-doped YBO$_3$ samples with ionic radius of doped RE$^{3+}$ ion.

**Fig. S3.** Change in the lattice strain along $a$-direction of RE$^{3+}$-doped YBO$_3$ samples with ionic radius of doped RE$^{3+}$ ion.
**Fig. S4.** SEM image of the undoped YBO$_3$ sample.

**Fig. S5.** Hydrodynamic size distributions of RE$^{3+}$-doped YBO$_3$ samples.
**Fig. S6.** Actual cerium concentrations of Ce-doped YBO₃ samples prepared from different cerium sources.

**Fig. S7.** Hydrodynamic size distributions of Ce-doped YBO₃ samples prepared from different cerium sources.