Figure S1 The emission spectra of Ba$_3$Tb$_{0.99}$(BO$_3$)$_3$·0.01Sm$^{3+}$ ($\lambda_{em} = 607$ nm) and the excitation spectra ($\lambda_{em} = 607$ nm) of Ba$_3$Tb$_{0.99}$(BO$_3$)$_3$·0.01Sm$^{3+}$ and Ba$_3$Tb$_{0.98}$(BO$_3$)$_3$·0.02Eu$^{3+}$ ($\lambda_{em} = 625$ nm), respectively.
Figure S2 Emission spectra of Sm\textsuperscript{3+} ($\lambda_{\text{ex}} = 286$ nm) (a) and Eu\textsuperscript{3+} ($\lambda_{\text{ex}} = 286$ nm) (b).
Figure S3  The luminescence lifetimes of Tb\(^{3+}\) (a) and Sm\(^{3+}\) (b) in Ba\(_3\)Tb(BO\(_3\))\(_3\) \(x\)Sm\(^{3+}\).
Figure S4  The luminescence lifetimes of Tb$^{3+}$ (a) and Eu$^{3+}$ (b) in Ba$_3$Tb(BO$_3$)$_3$: yEu$^{3+}$.
Figure S5 Plot of log (I/x) as function of log (x) in Ba$_3$Tb(BO$_3$)$_3$:Sm$^{3+}$ and Ba$_3$Tb (BO$_3$)$_3$:Eu$^{3+}$. The inset is the emission intensities as function of Sm$^{3+}$ (Eu$^{3+}$) concentration ($\lambda_{ex}$ = 286 nm).