Supporting Information For:

Impact of Hydrostatic Pressure on the Crystal Structure and Photoluminescence

Property of Mn⁴⁺-Doped BaTiF₆ Red Phosphor

Yonggang Wang,^{*a,b,c} Ting Wen,^c Lingyun Tang,^b Liuxiang Yang,^b Wenge Yang,^{*b,d} and Yusheng Zhao^{*a}

^{*a*} High Pressure Science and Engineering Center, University of Nevada, Las Vegas, Nevada 89154, United States ^{*b*} High Pressure Synergetic Consortium (HPSynC), Geophysical Laboratory, Carnegie Institution of Washington, Argonne, IL 60439, United States

^c Institute of Nanostructured Functional Materials, Huanghe Science and Technology College, Zhengzhou, Henan 450006, China

^d Center for High Pressure Science and Technology Advanced Research (HPSTAR), Pudong, Shanghai 201203, China

Fig. S1. SEM image of Mn⁴⁺-doped BaTiF₆.



Fig. S2. Raman mode of TiF_6 octahedra.



Fig. S3. The full PL spectra of selected pressure points for Mn^{4+} -doped BaTiF₆ upon compression.



Fig. S4. Typical fluorescence emission spectrum of ruby $(Cr^{3+}-doped Al_2O_3)$.

