Pressure-induced phase transition in α- and β-BiNbO₄

Xingbang Dong^{1,2}, Zhanbiao Huangfu^{1,2}, Shiquan Feng^{1,2}, Yongfu Liang^{1,2}, Huanjun Zhang^{1,2}, Xiang Zhu^{1,2}, Kun Yang^{1,2}, Zheng Wang^{1,2,*}, Xuerui Cheng^{1,2,*}, Lei Su^{3,4,*}

1. School of Physics and Electronic Engineering, Zhengzhou University of Light Industry, Zhengzhou, Henan, 450002, China

2. Henan key laboratory of magnetoelectric information functional materials, Zhengzhou, Henan, 450002, China

3. Center for High Pressure Science and Technology Advanced Research, 100094 Beijing, China

4. Key Laboratory of Photochemistry, Institute of Chemistry, University of Chinese Academy of Sciences, Chinese Academy of Sciences, Beijing, 100190, China



Fig. S1 Pressure-induced evolution of Raman spectrum (a) α -BiNbO₄ under compression, (b) α -BiNbO₄ under decompression, (c) β -BiNbO₄ under pressure cycle.



Fig. S2 The phonon dispersion relations of $\alpha\mbox{-BiNbO}_4$ and $\beta\mbox{-BiNbO}_4$ at ambient at 13

GPa.