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Supporting Information for

High-Pressure Phase Transition of Fe-bearing Orthopyroxene Revealed by Raman Spectroscopy

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References:

- Lin, C.-C. (2004). Pressure-induced polymorphism in enstatite (MgSiO_3) at room temperature: clinoenstatite and orthoenstatite, *Journal of Physics and Chemistry of Solids*, 65(5), 913-921, 10.1016/j.jpcs.2003.09.028.
- Zhang, J. S., Reynard, B., Montagnac, G., Wang, R. C., & Bass, J. D. (2013). Pressure-induced *Pbca*-*P2₁/c* phase transition of natural orthoenstatite: Compositional effect and its geophysical implications, *American Mineralogist*, 98(5-6), 986-992, 10.2138/am.2013.4345.

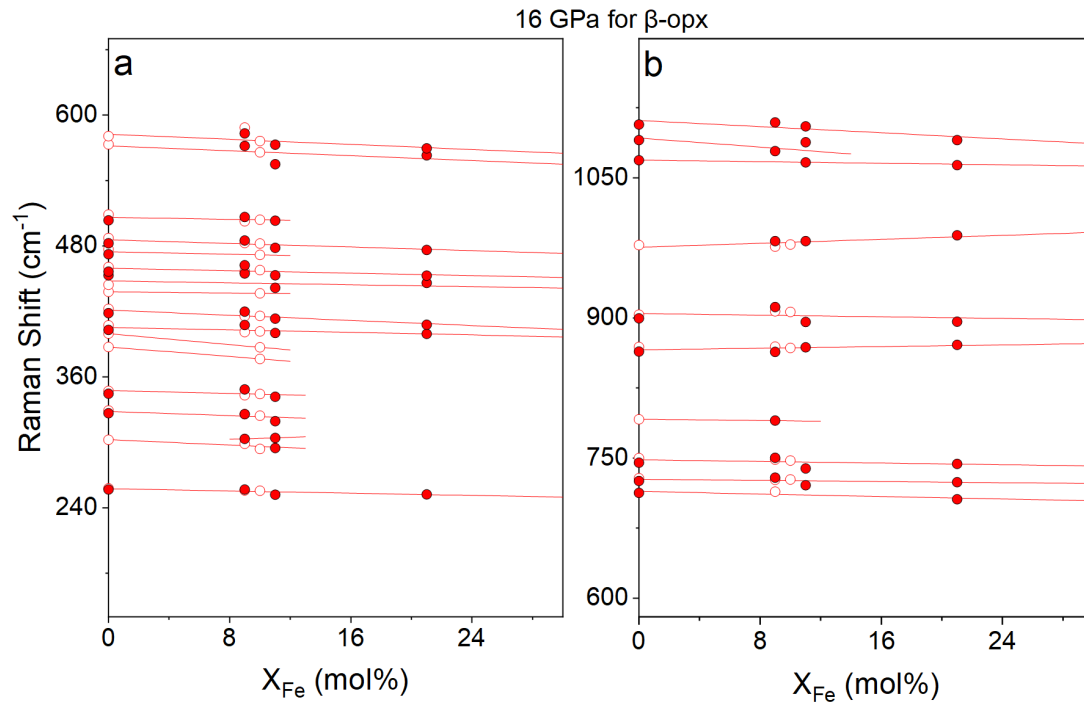


Figure S1. Raman shifts of β -orthopyroxene with different Fe content at 16 GPa. Solid circles: this study; open circles: previous experimental results (Lin, 2004; Zhang et al., 2013). Red lines: fitting results.

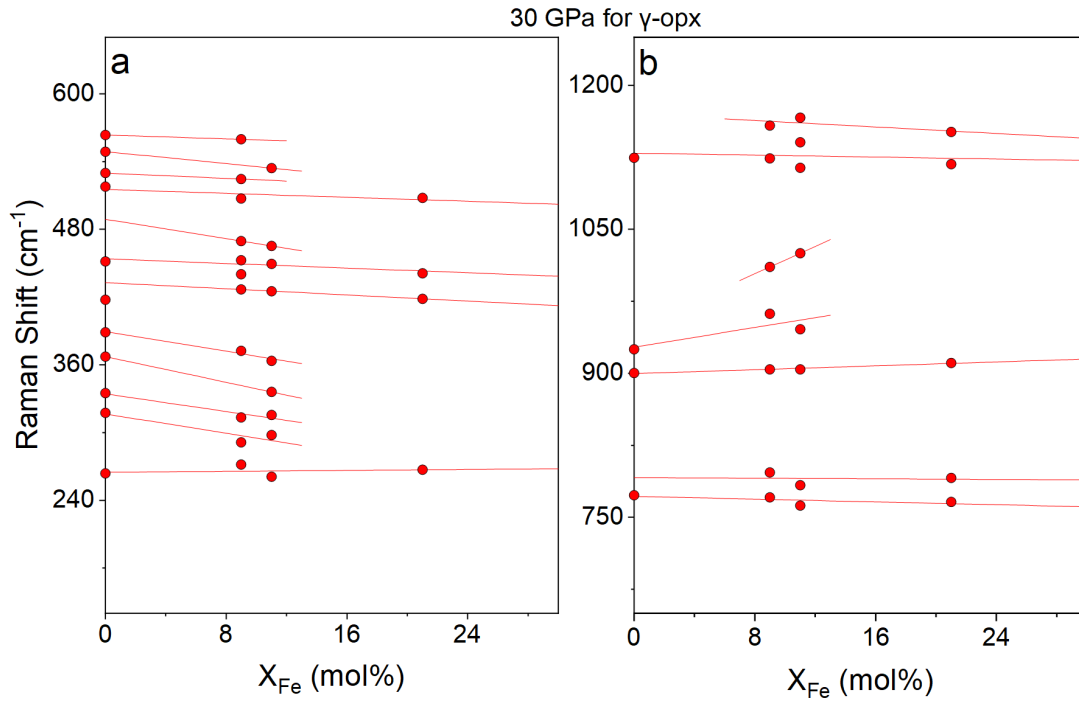


Figure S2. Raman shifts of γ -orthopyroxene with different Fe content at 30 GPa. Solid circles: experimental results; red lines: fitting results.