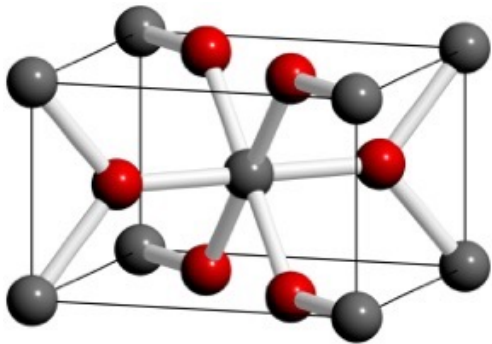
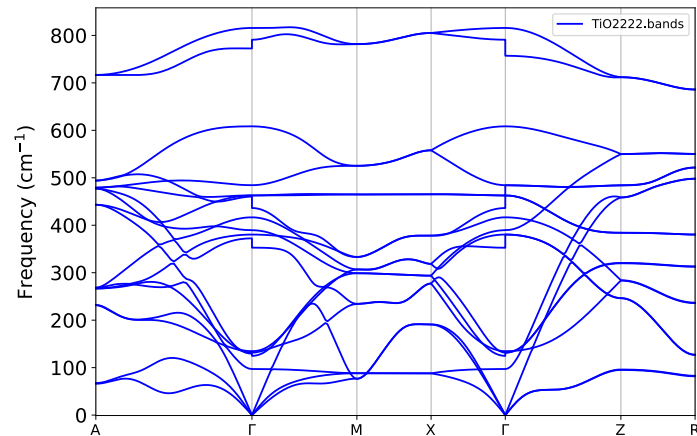


1 : Crystal structure

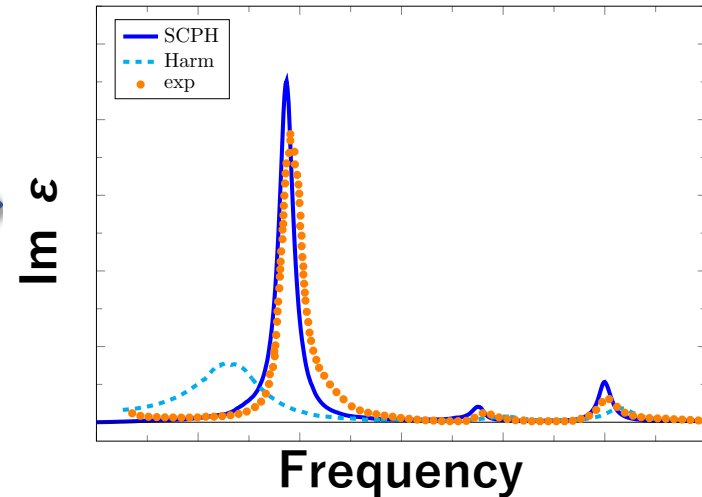


2 : Phonon property



Harmonic phonon
Anharmonic phonon

3 : dielectric function



$$\epsilon_{\alpha\beta}(\omega) = \epsilon_{\alpha\beta}^{\infty} + \frac{1}{V_0} \sum_{(\mathbf{0},j)} \frac{S_{\alpha\beta}^j}{\omega_{0j}^2 - \omega^2 + 2\omega_{0j}\Sigma_{0j}(\omega)}$$