

Elasticity of *Cmcm* CaIrO<sub>3</sub>

# Taku Tsuchiya[1]; Jun Tsuchiya[2]

[1] GRC, Ehime Univ; [2] GRC, Ehime University

CaIrO<sub>3</sub> has the orthorhombic *Cmcm* crystal structure which is isostructural to the recently discovered high-pressure post-perovskite phase of MgSiO<sub>3</sub> even at room pressure. Due to the quite high transition pressure of MgSiO<sub>3</sub> over 100 GPa, its low-pressure analog is helpful to study physical properties of the postperovskite phase experimentally. Here we have investigated static elasticity of the CaIrO<sub>3</sub> phases by means of the density functional computation method to clarify how CaIrO<sub>3</sub> is good low-pressure analog of MgSiO<sub>3</sub> in terms of elasticity. Calculated results showed that at low pressures, the elastic properties of *Cmcm* phase are very different from those of MgSiO<sub>3</sub> at its stable pressures.

Research supported by Ehime Univ Project Fund, JSPS Grant-in-Aid.