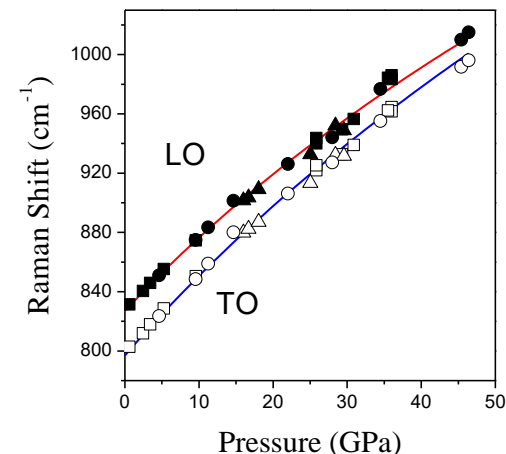
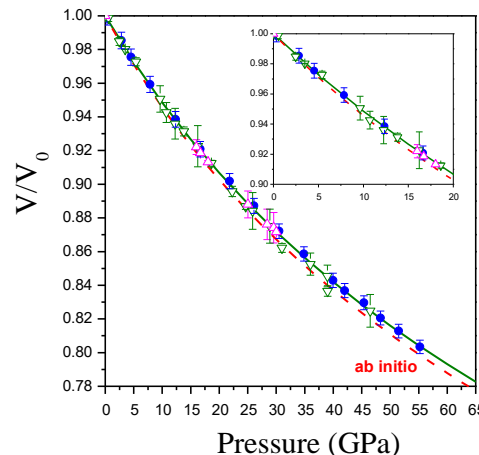


Boron phosphide under pressure

Contexte et verrou scientifique :

Equation of state of boron phosphide. Dash line shows the results of our *ab initio* calculations, solid line is the fit to the Murnaghan equation of state (left).

Pressure dependence of the Raman shift of the observed TO and LO modes of BP (right).



Résultats obtenus : Cubic BP has been *in situ* studied by synchrotron X-ray diffraction and Raman scattering up to 55 GPa at 300 K. The data on Raman shift *versus* pressure, combined with EOS data, allowed us to estimate the Grüneisen parameters of BP optical modes.

Domaine scientifique et d'application : High-pressure Physical Chemistry and Material Science

Partenaires académiques et industriels : Université P&M Curie; Bayerisches Geoinstitut; Stony Brook University

Publications : V.L. Solozhenko, O.O. Kurakevych et al., *J. App. Phys.*, **116**, 033501 (2014)