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# Wave propagation in micromorphic anisotropic continua with an application to PWO tetragonal crystals

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## Abstract

We study the coupled macroscopic and lattice wave propagation in PWO tetragonal 4/m crystals seen as continua with affine microstructure (or micromorphic). We obtain qualitative informations on the frequencies and the dispersion relations for various propagation directions: exact representation for the acoustic and optic frequencies and for the coupled vibrations modes are obtained for propagation directions along the tetragonal c-axis.

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