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# Techniques experimentales pour les metamateriaux acoustiques

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## Résumé

PART 1 : Observation and characterisation of forbidden bands in a PC. Experimental Band structure determination

- 1D Phononic Crystal made of a stack of rectangular plates. Particular case of piezo-electric plates
- 2D square array of steel cylinders embedded in an epoxy matrix.

PART 2 : Experimental demonstration of the negative refraction in a solid PC. Waves with opposite group and phase velocities

- Negative refraction in a solid phononic crystal
- Lamb waves in a plate with periodic corrugation

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