

O.32 Phonon-limited transport properties with ABINIT

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First-principles calculations of phonon-limited transport properties, such as conductivity, carrier mobility and Seebeck coefficient, represent an active area of research within the *ab-initio* community [1,2].

In this contribution, I will briefly review the different theoretical approaches commonly used to compute transport properties with particular emphasis on the linearized Boltzmann transport equation. Finally, I will discuss some technical aspects related to the ABINIT implementation.

[1] Feliciano Giustino. Electron-phonon interactions from first principles. *Rev. Mod. Phys.* **89**, 015003 (2017).

[2] Samuel Poncé et al First-principles calculations of charge carrier mobility and conductivity in bulk semiconductors and two-dimensional materials. *Reports on Progress in Physics* **83**, 036501 (2020).