PERTURBO: A software platform for accelerated discovery of microscopic processes in materials

Workflow for computing the e-ph matrix

Coupled dynamics of excited electrons and phonons

- Ab initio transport and ultrafast dynamics: hot carrier cooling, carrier conductivity, spin-flip dynamics, …

- e-ph: Atomic orbital & Wannier fn. interpolation, long-range e-ph, spin-orbit coupling, anharmonicity.

- Stand-alone code, Python interface+Fortran routines, MPI+OpenMP parallelization