

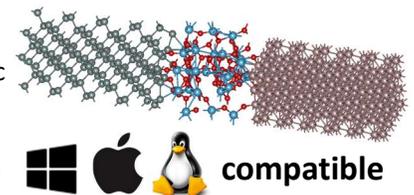
Nanoacademic Technologies develops advanced and innovative DFT-based solvers to study and predict materials and devices properties, and computer-aided design tools for spin-qubits.

NanoDCAL+ is an evolution of our state-of-the-art general-purpose first principles quantum transport package **NanoDCAL** – combining the nonequilibrium Green’s functions (NEGF) formalism with density functional theory (DFT) – that predicts nonequilibrium quantum transport in nanostructures, including current-voltage characteristics of nanoscale devices and boasts new features, architecture and improved performance.



A next generation multifunctional NEGF-DFT nanoelectronic transport solver

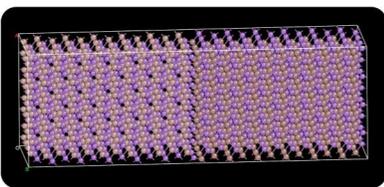
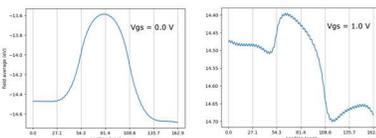
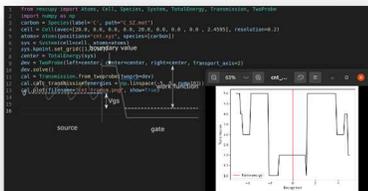
NanoDCAL+ (**Nano DFT CALculator plus**) is an LCAO implementation of NEGF-DFT. It is a general-purpose tool for ab initio modeling of non-equilibrium quantum transport. It inherits from **NanoDCAL** which has been used in hundreds of scientific publications in domains as varied as molecular electronics, nanotubes, topological insulators, batteries, magnetic tunnel junctions, metal grain boundaries and more. Its complementary set of features makes the best technological base for your R&D projects.



Key features:

- Written in Fortran and Python
- Provides enhanced modularity, interfaces with third party tools, improved parallelism, hardware portability and performance
- Focus on molecular and nanoscale electronics (realistic large-scale systems up to 10k+ atoms)
- Spintronics (collinear / non-collinear / spin-orbit coupling)
- Semiconductor nanoelectronics (I-V curve)
- Transmission, current and conductance calculators

Scattering states, photocurrents, thermoelectric currents, phonons calculations are part of **NanoDCAL** legacy version.



Updates are released on a regular basis and technical support is available to help our users by offering the best possible experience.

Stay tuned to our articles, newsletters and posts on our **LinkedIn** pages to avoid missing anything about Nanoacademic’s and 4AM Software latest news!

Contact 4AM Software to test and adopt NanoDCAL+ to catalyze your material studies and R&D projects!