

CNG – Center for Nanostructured Graphene

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CNG – Center for Nanostructured Graphene – is funded by the Danish National Research Foundation with a 54 MDKkr (7.2 M€) grant, starting in February 2012, and running initially for six years with a possibility for a four year extension, pending a successful evaluation. The main stake-holder in CNG is DTU Nanotech, and additional partners include two other departments from DTU campus, DTU Fotonik and DTU Fysik, the center for electron nanoscopy DTU Cen, and the Physics Department from Aalborg University. DTU Danchip, the state-of-the-art clean room facility on DTU Campus is an important component in CNG's experimental research. In addition, many other researchers on the DTU campus are independently financed stake-holders in CNG's research program, so that all in all more than sixty persons contribute towards CNG's goals. The graphene research program at DTU Nanotech also receives important support from various EU financial instruments, including the Graphene Flagship, where CNG researchers participate in two work-packages (Fast Electronics, and Sensors).

CNG focuses on basic research, but all its research projects have long-time perspectives with the aim of applications. Its research profile has a broad range: it involves polymer chemists, nanofabrication specialists, experimental physicists, and condensed matter theorists using a wide palette of analytical and numerical tools, including large scale simulations of nanodevices, ab initio electronic structure calculations, and theory of quantum transport.

The key word in CNG's research program is "control": we want to achieve an increased control of the electrical, thermal, and optical properties of graphene, and other novel two-dimensional materials, by adding carefully designed nanoscale features to the pristine material.



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