

# CNR opens research center in a new “Nanotech Valley” near Lecce

by *Marzio Bartoloni*



Nanotechnology has found a home in ***Puglia***, thanks to €18 million in investments and with 12,000 square meters of laboratories and 200 researchers at the new nanotechnology center of the National Research Council (CNR) inaugurated recently in ***Lecce*** - inside the Ecotekne Campus at the University of Salento.

This center is set to become one of the most prominent in Europe, thanks also to well-consolidated alliances with some big market players, such as STMicroelectronics, Bosch and Engineering.

The new center is one of the largest research infrastructures, both at the Italian and European level, dedicated to the development of nanotechnology and its applications in the scientific and production fields.

The structure, which is the result of a collaboration between the Puglia region and CNR, has its brain and heart in the Lecce institute CNR-Nanotec, an international avant-garde multi-disciplinary research center with over 12,000 square meters of laboratories and facilities and more than 200 researchers with diverse scientific profiles: physicists, chemists, biologists, doctors and engineers.

The intention is to continue to attract the sector's best brains. The center for nanotechnology cost €18 million and was financed in the following way: €10 million from the ***Puglia*** region, €4 million from CNR and €4 million from MIUR, the Ministry of Education, Universities and Research. Of these €18 million, €14 million were used to create the structure and €4 million for the acquisition of equipment.

One of the objectives of the center and of CNR-Nanotec is the development of new research and the prototyping of innovative materials for devices and

applications, taking advantage of the great potential of nanotechnology through a bottom-up (self-assembling and molecular engineering with organic molecules, polymers and biomolecules) and top-down (latest generation nano-lithography applied to semiconductor materials) approach.

Applications range from energy to construction, from diagnostics to communications, from security all the way to the environment.

For Giuseppe Gigli, the Director of CNR-Nanotec, “the challenge conducted by our researchers is an ambitious one on an international level, already counting on the established partnership with prestigious centres, such as the Molecular Foundry of the University of Berkeley, the Imperial College of London, the Universities of Cambridge, Oxford, Tokyo, the Houston Medical Center, and, in the industrial field, with multinational leaders, including STMicroelectronics, Bosch and Engineering-Ingegneria informatica.

Nanotechnology, underscores Luigi Nicolais, the President of CNR, is one of economy’s cornerstones in the coming years. Getting the know-how and developing specific technologies could push this area of *southern Italy* to become “a reference point for the main multinational players in the sector.”

“Lecce has already a tradition of excellence in nanotechnology, with scientific results obtained by local researchers and by scientists who moved to the area after successful careers elsewhere in Italy or abroad -- like professor Giuseppe Gigli, CNR-Nanotec Director, and Daniele Sanvitto, Senior researcher,” said Fabio Pulizzi, Chief Editor of Nature Nanotechnology.

“The creation of the CNR Nanotechnology Centre is in recognition of the success so far, but also, and above all, the opportunity to generate the necessary critical mass to reach clear international success in scientific research,” he said.