

Research:

Our researchers cover a variety of fields related to nano materials, nano photonics, nano quantum and nano biology. Their research leads to diverse applications and range from clean fuel to drug delivery, navigation systems, self assembling materials and more.

Dan Maydan Prize in Nanoscience Research:

In honor of Dr. Dan Maydan, who played a major role in the establishment of the highly successful Israel National Nanotechnology Initiative (INNI), The Dan Maydan Prize in Nanoscience Research is awarded annually to an emerging and outstanding young scientist, from Israel or abroad, for his/her significant academic accomplishments in the field of nanoscience and nanotechnology.

M.Sc Program:

The elite cross-disciplinary M.Sc program was launched in 2009. It offers four initial tracks leading to a M.Sc degree: Chemistry, Physics, Applied Physics and Pharmacy. Most of the students continue towards a PhD. Our alumni already hold key positions in the academic world and in the Israeli industry.

Annual Conference and Seminars:

The annual conference attracts an impressive number of students, staff scientists and center faculty members, with over 200 participants. Over the years the conference hosted distinguished guests such as Nobel Prize Laureates Prof. Ada Yonath and Prof. Roger Kornberg. During the conference prizes are given to 4 carefully selected outstanding PhD students, Outstanding posters and the popular Nano Art competition.

International Activities:

Our researchers have academic ties all over the world. The Nano Center established and promoted international research collaborative programs, among them are joint research collaborations with Academia Sinica (Taiwan) focusing on Innovative Materials and Analytical Technology Exploratory Program with significant funding. Another successful cooperation is with the Cleveland Clinic (USA) with the goal of transforming academic knowledge in the field of nano medicine into applicable drugs and procedures.

Contact Information

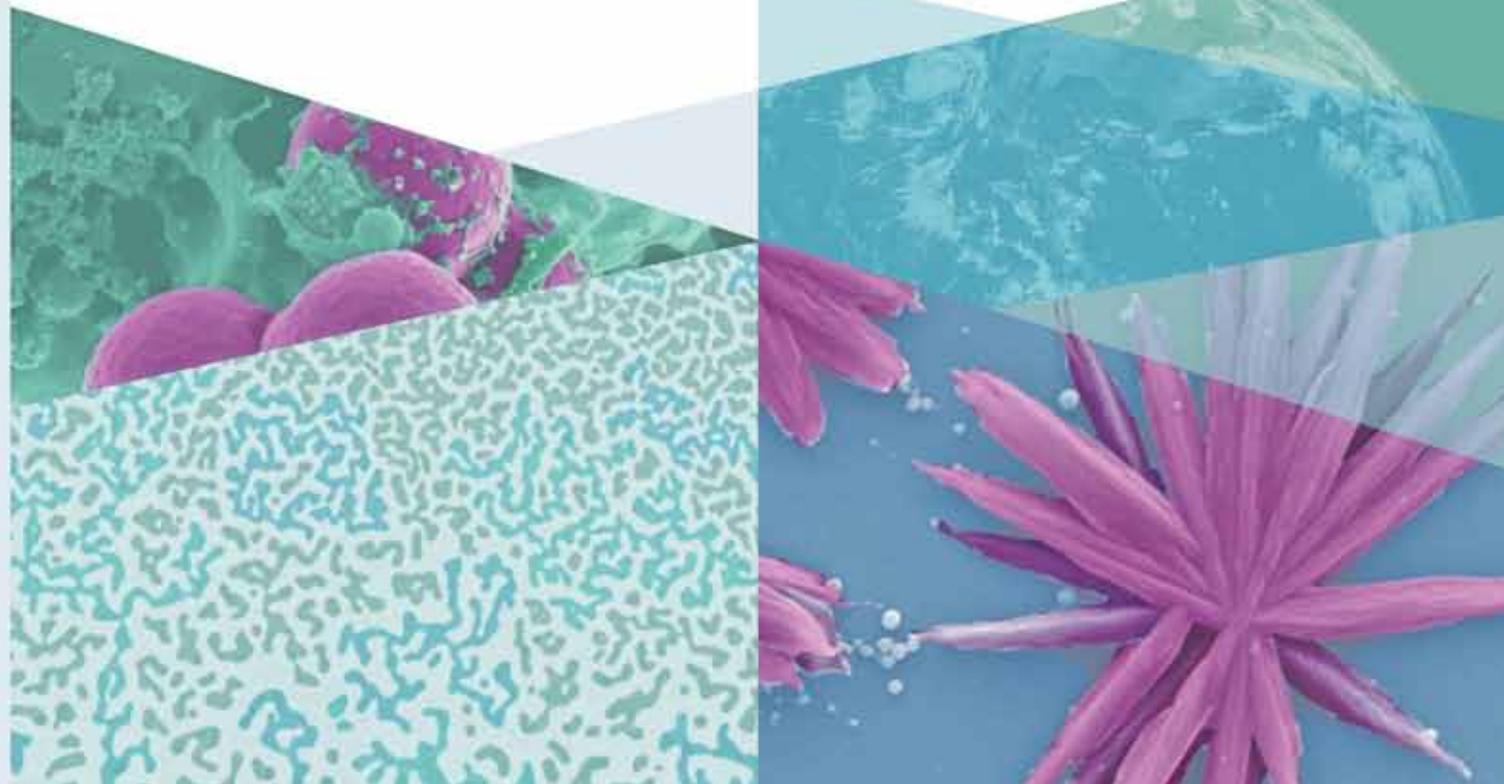
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NANO

SMALL DIMENSIONS
INFINITE HORIZONS



WHAT IS NANO?

Nanoscience and nanotechnology deal with the making and assembly of tiny objects which are approximately 100,000 times smaller than the thickness of a human hair. One nanometer is about the length of five to ten atoms in a row. A nanometer is to a meter what a football is to the entire earth.

Because of their small size, nanomaterials have new optical, magnetic, mechanical, chemical and biological properties. Consequently, they can be used to develop innovative products with new functionalities and special properties.

Nanoscience essentially works with the basic building blocks of matter as a platform for creating new materials and applications by tailoring properties at the atomic and molecular levels.

The Hebrew University of Jerusalem's Center for Nanoscience & Nanotechnology (HUCNN):

HUCNN fosters top-notch cross-disciplinary research from different faculties and fields including chemistry, physics, engineering, life sciences, agriculture, pharmacy, and medicine. With **88 member groups**, more than **500 M.Sc. and Ph.D. students**, The Nano Center plays a major part in the education and training of the future generation of Israel's leading scientists and engineers who are pursuing innovative studies and research in nanotechnology at the Hebrew University.

Our members publish **over 400 articles each year** with high impact.

28 of our members received the highly prestigious and competitive ERC grants which sums up to over **45 M Euro**, the largest number in any equivalent nanocenter in Israel or in Europe.

Over 70 private industrial companies rely on the R&D services we provide. Strengthening the industry in Jerusalem is a strategic goal of the municipality and the Center plays an important role in this.

37 Start-up companies were established by our members between 2007-2018.

The HUCNN facilities includes top of the line research equipment for nanofabrication & nanocharacterization. The Center's professional staff provide expert scientific technological assistance for the HUCNN members as well as for other academic institutions in Israel and abroad and the Israeli industry.

The HUCNN's three units fulfil the overall academic requirements of the advanced researches conducted at the Center:

UNC - The Unit for Nano Characterization was established in 2002 and serves as the "eyes" that researchers need to identify and characterize the nanometric structures they have created. The UNC has a support staff of skilled scientists and engineers who provide solutions to problems of material characterization on the nanometer scale. Our newest piece of equipment is a THEMIS (Transmission Electron Microscope) which can detect the composition of matter at the scale of a single atom.

UNF - with 300m2 of clean rooms and up to date comprehensive and advanced fabrication tools, the Unit for Nanofabrication was established in 2007 and provides the state-of-the-art infrastructure for preparing nanoscale structures and devices, which enable the connection of nanoscopic objects to the macroscopic world.

This unit combines two complementary approaches utilized for nanofabrication "Bottom-Up" approach that is inherent to nano-chemistry and "Top-Down" approach commonly applied in modern microelectronics efforts to shrink down device dimensions.

The Center for 3D Printing and Functionality - Israel's first academic 3D Printing Center with a focus on 3D and functional printing. The interdisciplinary center enables researchers from chemistry, physics, biology, medicine, agriculture and computer science to explore new scientific and technological avenues in this exciting and emerging field. The central "printing lab" provides accessibility for Hebrew University researchers to a variety of printing technologies needed for performing high-level research in this field as well as encouraging academic and industrial collaborations and breakthroughs. 3D printing enables fabrication of customized tools for nanomaterials analysis and fabrication. Furthermore, the emergence of new nano-materials enabled a broad range of applications using 3D Printing.