

Nanoparticle Impact Database Launched

Research into the possible medical and environmental dangers of nanoparticles received a major boost with the launching of a project to develop a sophisticated database of scientific publications related to nanoparticle toxicity. The project termed NHECD (an acronym for Creation of a Critical and Commented Database on the Health, Safety, and Environmental impact of Nanoparticles) was inaugurated in January at a scientific conference hosted by Tel Aviv University's Department of Industrial Engineering.

Nanoparticles are a major area of scientific research due to nanotechnology's potential applications in a wide variety of fields from biomedicine to electronics. With a high surface to volume ratio and extremely small sizes, nanoparticles can enter the body more easily and in different ways than larger particles. How they behave in relation to other tissues and the affects of accumulated nanoparticles are vital matters of concern.

NHECD received 1.5 million euro from the European Union as part of the Seventh Framework Program for Research and Technological Development (Grant Agreement No.: NMP4-SA-2008-218639). The project includes researchers from leading European and Israeli institutions and among the attendees at the kickoff meeting at Tel Aviv University were: The project initiator, Prof. Oded Maimon (Dept of Industrial Engineering, Tel Aviv University); Prof. Rafi Korenstein (Faculty of Medicine, Tel Aviv University); Dr. Pieter van Broekhuizen and Dr. Hildo Krop from IVAM (Holland), Dr. Hanno Wittig from tp21 (Germany) and Dr. Lior Rokach (Ben Gurion University) representing Dr. Francois Rossi from JRC (EU Joint Research Centre) Ispra (Italy).

The objective of NHECD is to create and maintain an automated database that will retrieve, index and extract from scientific publications results related to the health and environmental impact of nanoparticles. The annotated, commented results and the extracted information will be stored at a central repository that will be available to:

- Research scientists
- Regulatory bodies and NGOs
- The general public

NHECD will use advanced data-mining algorithms such as information and graph extraction and taxonomies. This EU project is coordinated by Prof. Oded Maimon (maimon@eng.tau.ac.il) and managed by Abel Browarnik (abel@eng.tau.ac.il) also from Tel Aviv University's Department of Industrial Engineering. The project duration is four years, starting from December 1st, 2008.