



NanoMag - Nanometrology Standardization Methods for Magnetic Nanoparticles

The objectives of the EU financed NanoMag project are to standardize, improve and redefine analyzing methods of magnetic nanoparticles. Using improved manufacturing technologies, synthesized magnetic nanoparticles with specific properties will be analyzed with a multitude of characterization techniques (focusing on both structural as well as magnetic properties). Bringing the results together will give a self-consistent picture which describes how structural and magnetic properties are interrelated. All of the NanoMag results will be used to define standard measurements and techniques which are necessary for defining a magnetic nanoparticle system and for quality control. The application areas of magnetic nanoparticles in the NanoMag project is focused on biomedical applications, for instance biosensing (detection of different biomarkers), contrast substance in tomography methods (Magnetic Resonance Imaging and Magnetic Particle Imaging) and magnetic hyperthermia (for cancer therapy).

NanoMag brings together leading experts in; manufacturing of magnetic single- and multi-core nanoparticles, analyzing and characterization of magnetic nanostructures, and national metrology institutes. In the NanoMag consortium we have gathered partners within research institutes, universities and metrology institutes, all carrying out front end research and developing applications in the field of magnetic nanoparticles.

The NanoMag project started in November 2013 and will continue until November 2017. The NanoMag consortium is; Acreo Swedish ICT AB, Swedish ICT Research AB, University College London, Uppsala University, The Spanish National Research Council (CSIC), Micromod Partikeltechnologie GmbH, Technical University of Denmark, University of Cantabria, Chalmers University of Technology, Federal Institute of Materials Research and Testing (BAM), Technical University of Braunschweig, nanoPET Pharma GmbH, Solve Research & Consultancy AB, University of Lübeck, Eindhoven University of Technology, The Physikalisch Technische Bundesanstalt (PTB), SP Technical Research Institute of Sweden, National Physical Laboratory (NPL).

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