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Dr. Andreas Roelofs is the Deputy Division Director of Argonne's Center for Nanoscale Materials (CNM), a Department of Energy national user facility. He holds a Diploma in physics from the University of Cologne and received his PhD in physics in 2004 from the RWTH Aachen in Germany. Dr. Roelofs' thesis work was on the investigation of scaling effects of ferroelectric thin films and nanoparticles for FeRAM applications. During this time, he was strongly involved in the improvement of piezo-response force microscopy (PFM).

In 2003, Dr. Roelofs accepted an assignment as research staff member at Seagate Research in Pittsburgh, PA. During his last year at Seagate, Dr. Roelofs led the probe recording team. During his time at Seagate, his work was focused on developing MEMS-based storage devices (probe recording) based on ferroelectric thin films.

In 2006, Dr. Roelofs joined Seagate's Memory Products Division in Minnesota as a Director and led the advanced testing and failure analysis groups. One of the functions of this division was the development of new solid state memory for FLASH replacement in solid state discs (SSD).

In 2009, Dr. Roelofs joined aixACCT Systems GmbH, the leader in piezoelectric and ferroelectric characterization, and opened its U.S. subsidiary, of which he was head.

His research interests include ferroic thin films and nanoparticles as well as dielectric thin films exhibiting resistivity-switching properties. Other areas of interest are the development of micro-machined-electro-mechanical devices actuated by piezoelectric thin films (piezo-MEMS) and the development and enhancement of scanning probe microscopy techniques applicable to nanomaterials.

Dr. Roelofs holds 10 U.S. patents, 6 patent applications are pending. He has authored or coauthored over 30 scientific journal articles, proceedings, and book chapters.