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Andreas Roelofs is the Interim Division Director and Industrial Liaison of Argonne's Nanoscience and Technology Division (NST) as well as the Center for Nanoscale Materials (CNM), a Department of Energy national user facility. He holds an advanced degree in physics (Dipl.-Phys) from the University of Cologne and received his doctoral degree (Dr.rer.nat.) in physics from the RWTH Aachen in Germany. Dr. Roelofs thesis work focused on the investigation of scaling effects of ferroelectric thin films and nanoparticles for ferroelectric random access memory (FeRAM) applications. During this time he was strongly involved in the development of piezo-response force microscopy.

In 2003 Dr. Roelofs accepted an assignment as Research Staff Member at Seagate Research. During his time at Seagate Research his work was focused on developing MEMS-based storage devices (probe recording) based on ferroelectric thin films. During his time at Seagate Research he led his team to a successful technology demonstration and received a stock award for his accomplishments. In 2006 Dr. Roelofs joined Seagate's Memory Products Division in Minnesota as a Director and led the advanced testing and the 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). 2009 Dr. Roelofs joined aixACCT Systems GmbH, the leader in piezoelectric and ferroelectric characterization, and opened and led the U.S. subsidiary for aixACCT Systems.

The research interests of Dr. Roelofs 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 nano-materials.

Dr. Roelofs holds 15 US patents and has authored or coauthored multiple scientific journal articles, proceedings and book chapters.