

CALL FOR PAPERS

Special Issue on Nanoscale Ferroelectrics

(Submission deadline: June 30, 2005)

Ferroelectric-based devices continue to decrease in size and just entered the realm of nanoscale dimensions. It is expected that many useful properties of ferroelectrics and piezoelectrics will be modified at the nanoscale due to increased influence of interfaces, point and extended defects, and fluctuations. Also, various size effects are predicted that are inevitable for such a cooperative phenomenon as ferroelectricity. Recent progress in the deposition and patterning techniques has not been followed by the corresponding understanding of ferroelectric phenomena at the nanoscale. This apparently limits further miniaturization of ferroelectrics and poses serious problems in the development of ferroelectric-based non-volatile memories, photonic and electrooptic devices, piezoelectric sensors and actuators and systems, probe-based storage devices etc. The research on nanoscale ferroelectrics continues to broaden and received a great attention of ferroelectric community nowadays.

The IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control invites the submission of manuscripts on Nanoscale Ferroelectrics that fall within the scope of the UFFC Transactions. This Special Issue seeks contributions from authors who are engaged in any aspect of fabrication, characterization and application of Nanoscale Ferroelectrics. Contributions are sought in the following areas:

- Novel techniques for nanopatterning and domain engineering of ferroelectrics
- Nanoscale characterization of ferroelectrics using analytical techniques (SPM, TEM, X-ray, etc)
- Degradation phenomena in ferroelectrics at the nanoscale
- Local electrical and mechanical properties and size effects in ferroelectrics
- Ultrathin ferroelectric thin films and their applications
- Nanoelectromechanical devices and systems based on ferroelectrics
- Other relevant topics

All contributions should be submitted to the IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, Manuscript Central at <http://tuffc-ieee.manuscriptcentral.com/>. When submitting, authors should select the Manuscript Type, "Special Issue Papers". In addition, enter the name of this special issue in the field "If the manuscript type is 'Special Issue', please enter the name of the Special Issue". It is important that your manuscript is distinguished from a regular submission. In the first paragraph of "Comments to Editor-in-Chief", you should state that the submission is intended for the Special Issue on Nanoscale Ferroelectrics. Instructions for preparation and submission of your manuscript may be found on the IEEE Transactions on UFFC website: <http://www.ieee-uffc.org/tr/contrib.pdf>

All manuscripts are subject to the normal peer-review process. The submission deadline is **June 30, 2005** with an expected publication date in the first half of 2006.

The guest editors will be
Prof. Alexei Gruverman
North Carolina State University
Raleigh, North Carolina, 27695-8202 U.S.A.
Email: agrouve@ncsu.edu

and
Dr. Andrei Kholkin
University of Aveiro
3810-193 Aveiro
Portugal
Email: kholkin@cv.ua.pt