

# Fabio Miletto Granozio

Guest Editor for this issue of MRS Bulletin

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Oxide-Based Electronics). He was director of the Naples Unit of CNR-SPIN in 2010–2011 and of the Coherentia-INFM National Research Center in 2009. He obtained his PhD degree in physics in 1995 from the University Federico II of Naples. Current research includes the growth and study of epitaxial oxide thin films and heterostructures, with special emphasis on systems exhibiting two-dimensional electron gases at oxide interfaces, superconductivity, strongly correlated behavior, metal-insulator transitions, and different kinds of magnetic ordering.



# Gertjan Koster

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Koster has been an appointed associate professor at the University of Twente since January 2011. After completing a master's degree in applied physics (1995) and a PhD degree (1999), he moved to the Geballe Laboratory for Advanced Materials, Stanford University. In 2007, he joined the IMS group at the University of Twente as

an assistant professor. Current research includes the growth and study of artificial ceramic oxide materials, the physics of reduced scale (nanoscale) materials, metalinsulator transitions, and *in situ* photoelectron spectroscopy, including (multi) ferroic, piezoelectric, magnetic, and correlated electron complex oxide materials.



# **Guus Rijnders**

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Rijnders finished his PhD work in 2001, after which he became an assistant professor in the Low Temperature Division of the University of Twente. In 2003, he joined the Inorganic Materials Science group, University of Twente, where he became an associate professor in 2006. Since April 2010, he has been a full professor in nano-

electronic materials. His research focuses on the structure–property relation of atomically engineered complex (nano)materials, especially thin-film ceramic oxides. The classes of investigated materials include ferromagnetic, superconducting, ferroelectric, as well as piezoelectric.



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# Ariando

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Ariando is an assistant professor in the Department of Physics and NUSNNI-NanoCore at the National University of Singapore, where he initiated and is leading a research group on advanced functional materials with a focus on control of oxide interfaces at the atomic level. He has published papers on superconducting, magnetic, and new emerging properties at thin films, heterostructures, and interfaces of complex oxides.



#### Bernard A. Boukamp

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Boukamp became a member of the Inorganic Materials Science group (IMS) in 1984 and since 2006 holds the position of associate professor. He obtained his PhD degree in 1974 at the University of Utrecht (The Netherlands). From 1974 to 1980, he was a research associate at Stanford University, CA, and from 1980 to 1983 he was a postdoctoral fellow at the

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Bousquet is a FRS-FNRS research associate at the University of Liège in Belgium since 2012. After his undergraduate studies in France, he received his PhD degree in science from the University of Liège (2008) followed by two postdoctoral research positions at the UC Santa Barbara (2009–2010) and at ETH Zurich, Switzerland (2011–2012). His research interests are in the development of first-principles

techniques for designing and understanding materials having coupled electric and magnetic properties.



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Coey is a professor of physics at Trinity College Dublin, where he leads the Magnetism and Spin Electronics Research Group, and is a visiting professor at the National University of Singapore. One of the promoters of CRANN, the Irish Nanoscience Research Centre, he has published many papers and several books on magnetism and magnetic materials. He is a Fellow of the Royal Society and a Foreign Associate of the National Academy of Sciences.

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Dawber is an assistant professor in the Department of Physics and Astronomy at Stony Brook University. He has held this position since 2008, after completing his PhD degree at the University of Cambridge, UK, in 2003, and postdoctoral work at the University of Geneva, Switzerland. Dawber's research involves ferroelectric materials, mostly as thin films, with a current focus on artificially layered ferroelectric superlattices.



#### Hans Hilgenkamp



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Hilgenkamp chairs the Interfaces and Correlated Electron Systems Group at the University of Twente. Previous appointments include the IBM Zurich Research Lab (1995–1996) and the University of Augsburg, Germany (1997–2000), following his PhD degree in 1995 from Twente. His research involves high- $T_c$  superconductors and related complex oxides, thin-film devices, electronic properties of nanostructures, and

scanning SQUID magnetic microscopy. He is also at the University of Leiden and a visiting professor at the National University of Singapore. He was selected as a Young Scientist delegate to the World Economic Forum in 2008 and 2009, and was one of the co-founders of the Global Young Academy.



#### **Carlos Leon**

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Leon has been a professor in the Department of Applied Physics at the Universidad Complutense de Madrid since 2005. He received his PhD degree in physics in 1997 from the Universidad Complutense de Madrid, followed by postdoctoral work at the Naval Research Laboratory in Washington, DC. His research interests include the dynamics of mobile ions, particularly in nanostructured ionic conductors, and complex oxide interfaces.



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Millis is a professor of physics at Columbia University. He received his undergraduate degree from Harvard University and completed his doctoral work at MIT under the supervision of Patrick Lee, after which he became a postdoctoral researcher and then a permanent member of the technical staff at AT&T (later Lucent Technologies) Bell Laboratories. Following faculty appointments at The Johns Hopkins University and Rutgers

University, he joined Columbia in 2001. His research focus is theoretical condensedmatter physics, especially the properties of strongly correlated electrons in solids, and he has recently been engaged in the development and use of new numerical methods. He has authored or co-authored more than 300 publications and is a Fellow of the American Physical Society.



#### Warren Pickett

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Pickett is a theoretical physicist who has spent 16 years at UC Davis and formerly chaired both the Physics Department and the APS Division of Condensed Matter Physics. His interests include unusual magnetic phenomena and superconductivity in its many aspects, both of which can emerge at oxide interfaces, where low dimensionality and confinement produce new collective phases. His publications include several on the

computational design of better strong-coupling superconductors and searches for half metallic antiferromagnets.



# Jacobo Santamaria

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Santamaria is a full professor of physics since 2004 in the Applied Physics Department at the Universidad Complutense de Madrid. He is also head of the Complutense Research Group, Physics of Complex Materials-GFMC. Santamaria is devoted to the study of interface phenomena in heterostructures and nanostructures of correlated

oxides, with a special emphasis on magnetism and superconductivity and ion diffusion in solids.



#### **Susanne Stemmer**

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Stemmer is a professor of materials at the University of California, Santa Barbara (UCSB). She received her Diploma in Materials Science from the Friedrich-Alexander University Erlangen-Nürnberg (Germany) and completed her doctoral work at the Max-Planck Institute for Metals Research in Stuttgart (Germany). She received her doctoral degree from the University of Stuttgart in 1995. Following several postdoc-

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