Symposium 14: Oxide Materials for Nonvolatile Memory Technology and Applications
Tuesday, June 4, 2013
Oxide Materials for Nonvolatile Memory I

1:20 PM-3:40 PM
Room: Tudor
Session Chair(s): Dinghua Bao

1:20 PM
(PACRIM10-S14-001-2013) Growth/Dissolution of Conductive Filaments in Oxide-Solid-Electrolyte-Based RRAM (Invited Speaker)
Qi Liu, Ming Liu*, Shibing Long, Hangbing Lv, Institute of Microelectronics, Chinese Academy of Sciences, China

1:50 PM
(PACRIM10-S14-002-2013) Thin amorphous rare-earth scandate for nonvolatile resistive random access memory application (Invited Speaker)
Wen-Zhi Chang, Jinn P. Chu*, National Taiwan University of Science and Technology, Taiwan; Sea-Fue Wang, National Taipei University of Technology, Taiwan

2:20 PM
(PACRIM10-S14-003-2013) Structural Influence on Resistive Switching in Hafnium based Resistive RAM Devices: a Molecular Dynamics Study
Giulia Broglia*, Monia Montorsi, Luca Larcher, Andrea Padovani, University of Modena and Reggio Emilia, Italy

2:40 PM
(PACRIM10-S14-004-2013) Characteristics of ZrO2-based flexible resistive switching memory fabricated by RF-magnetron sputtering
Chun-Chieh Lin, Huei-Bo Lin, Chien-Le Chang*, National Dong Hwa University, Taiwan

3:00 PM
(PACRIM10-S14-005-2013) Nanoscale Resolved Phase Change Dynamics
James L Bosse, University of Connecticut, USA; Ilja Grishin, Joshua Leveillee, Lancaster University, United Kingdom; Oleg V Kolosov, Bryan D Huey*, University of Connecticut, USA

3:20 PM
Break

Oxide Materials for Nonvolatile Memory II

3:40 PM-6:00 PM
Room: Tudor
Session Chair(s): Ming Liu

3:40 PM
(PACRIM10-S14-006-2013) HfO2 Thin Films for Resistive Switching Memory Technology (Invited Speaker)
Tseung-Yuen Tseng*, National Chiao Tung University, Taiwan

4:10 PM
(PACRIM10-S14-007-2013) Resistive switching properties of spinel structure oxide thin films (Invited Speaker)
Dinghua Bao*, Wei Hu, Ni Qin, Sun Yat-Sen University, China

4:40 PM
(PACRIM10-S14-008-2013) Research of Sub-10nm Transition Metal Oxide Resistive Non-Volatile Memory (R-RAM) (Invited Speaker)
Wednesday, June 5, 2013

Oxide Materials for Nonvolatile Memory III

8:30 AM-10:20 AM
Room: Tudor
Session Chair(s): Sunggi Baik

8:30 AM
(PACRIM10-S14-010-2013) Nonvolatile Memories using Single Electron Tunneling Effects in Si Quantum Dots inside Tunnel Silicon Oxide (Invited Speaker)
Ryuji Ohba*, Center for Semiconductor Research & Development, Toshiba Co., Japan; Mitani Yuichiro, Research & Development Center, Toshiba Co., Japan

9:00 AM
(PACRIM10-S14-011-2013) One-by-one electron charging/discharging in nanocrystal flash memories (Invited Speaker)
Jeanlex Soares de Sousa*, Universidade Federal do Ceará, Brazil; Robby Peibst, Institute for Solar Energy Research Hamelin (ISFH), Germany; Gil A Farias, Universidade Federal do Ceará, Brazil; Jean-Pierre Leburton, University of Illinois at Urbana-Champaign, USA; Karl R Hofmann, Leibniz Universität Hannover, Germany

9:30 AM
(PACRIM10-S14-012-2013) Ferroelectric tunnel junctions (Invited Speaker)
Vincent Garcia*, Andre Chanthbouala, Arnaud Crassous, Ryan Cherifi, Soren Boyn, Stephanie Fusil, Unite Mixte CNRS/Thales, France; Xavier Moya, University of Cambridge, United Kingdom; Hiroyuki Yamada, Unite Mixte CNRS/Thales, France; Stephane Xavier, Thales Research and Technology, France; Cyrille Deranlot, Karim Bouzehouane, Eric Jacquet, Unite Mixte CNRS/Thales, France; Neil D Mathur, University of Cambridge, United Kingdom; Julie Grollier, Manuel Bibes, Agnes Barthelemy, Unite Mixte CNRS/Thales, France

10:00 AM
Break

Oxide Materials for Nonvolatile Memory IV

10:20 AM-12:00 PM
Room: Tudor
Session Chair(s): Ryuji Ohba

10:20 AM
(PACRIM10-S14-013-2013) Texture Control of PbTiO3 Thin Films for Ferroelectric Storage Media
Daehong Kim, POSTECH, Republic of Korea; Yong Kwan Kim, Samsung Electronics Co., Republic of Korea; Sunggi Baik*, POSTECH, Republic of Korea

10:40 AM
(PACRIM10-S14-014-2013) Resistive Switching and Rectification Characteristics with CoO/ZrO2 Double Layers
Tsung-Ling Tsai*, Jia-Woei Wu, Tseng-Yuen Tseng, National Chiao Tung University, Taiwan

11:00 AM
(PACRIM10-S14-015-2013) Improvement of resistive switching properties of Ti/ZrO2/Pt with embedded Germanium
Chun-An Lin*, Debashis Panda, Tseung-Yuen Tseng, National Chiao Tung University, Taiwan