Organisation of the Technical Program

Duration of oral presentations

30' (plenary), 25' (invited), 15' (contributed) - including 3 minutes for questions / remarks by the audience).

Uploading of power-point presentations

Presentations have to be uploaded at the corresponding lecture hall on Tuesday 31.7 08:15-09:15 (for Tuesday's sessions), Tuesday 31.7 18:00-19:00 (for Wednesday's sessions), and on Wednesday 1.8 19:00-20:00 (For Friday's sessions).

Posters

Poster size: A0 (landscape format is preferred 120 cm x 84 cm). Posters to be mounted on the poster boards at the lobby (coffee break area) on Wednesday morning and removed not later than Thursday 2.8 at 08:30.

The poster session is held on Wednesday 1 August 15:30-18:00.

Registration and Secretariat

Registration is open at the lobby in front of the lecture halls: Tuesday 31.7 08 :00-10 :00

Secretariat (and late registration) hours :

(The Conference Secretariat is located behind the Victoria Lecture Hall, the entrance is outside the building).

Tuesday 31.7	11 :00-14 :30
Wednesday 1.8	10 :00-14 :30
Friday 3.8	10 :00-14 :30
Saturday 4.8	08 :00-10 :00

Schedule of Bus shuttle between Arusha and the Conference venue at Ngurdoto Lodge

Impala Hotel at Arusha to Ngurdoto	Ngurdoto to Impala Hotel at Arusha
07:30 (Tuesday, Wednesday, Friday)	08:30 (Tuesday, Wednesday,Friday)
09:30 (Tuesday, Wednesday, Friday)	10:30 (Tuesday, Wednesday,Friday)
11:30 (Tuesday, Wednesday, Friday)	12:30 (Tuesday, Wednesday,Friday)
13:30 (Tuesday, Wednesday, Friday)	14:30 (Tuesday, Wednesday,Friday)
17:00 (Tuesday, Wednesday, Friday)	18:30 (Tuesday, Wednesday)
17:15 (Tuesday, Wednesday)	21:30 (Tuesday, Wednesday)

	Tuesday 31.7.07			Wednesday 1.8.07			Thursday 2.8.07	Friday 3.8.07		
08:00	Registration (from 08:00)			Hall A (Victoria)	Hall B (Meru)	Hall C (Mandara)	Conference tour 08:30 -18:00	Hall A (Victoria)	Hall B (Meru)	Hall C (Mandara)
08:30	Hall A (Victoria)	Hall B (Meru)	Hall C (Mandara)	Session on Multiferroics	Session on Tunable Ferro-electrics	Symposium on Piezo Systems for Energy Conversion (Part I)		Symposium on Bulk Ceramic Processing (Part I)	Symposium on Electro-ceramic Memories (Part I)	Session on Piezo-electric Properties
09:30	Opening and Plenary Lectures	———	———	Break (10:10 – 10:40)				Break (10:00 – 10:30)		
10:30	Symposium on SOFC (Part I)	Symposium on Piezo-Response Enhancement (Part I)	Session on Thin Films	Symposium on Ferro-electrics Surfaces & Interfaces (Part I)	Session on Grain Boundaries, Defects, and I/E Conduction	Symposium on Piezo Systems for Energy Conversion (Part II)		Symposium on Bulk Ceramic Processing (Part II)	Symposium on Electro-ceramic Memories (Part II)	Session on Electro-ceramic MEMS
10:50	Lunch break (12:40 – 14:00)			Lunch break (12:40 – 14:00)				Lunch break (12:40 – 14:00)		
14:00	Symposium on SOFC (Part II)	Symposium on Piezo-Response Enhancement (Part II)	Session on Powders	Symposium on Ferro-electrics Surfaces & Interfaces (Part II)	Session on Opto-electronics and Solar-Energy Materials	Session on Local Methods & Processes		Session on Luminescent and Semi-conducting Materials	Session on Sensors	Session on Magnetic Oxides
	Break (15:50 – 16:20)			Poster session (15:30-18:00)				Break (15:30 – 16:00)		
16:20	Session on Dielectrics	Session on Lead Free Piezoelectrics	Session on Ceramics for Batteries					Plenary Closing Session	———	———
18:00	Welcome reception			Plenary Lectures	———	———				
19:00	Diner End 21:30			Diner and a celebration End 22:00				Tanzanian Banquet End 23:30		

Tuesday, 31 July 2007

08:00 - 09:30 Registration (refreshments and welcome)		
Hall A (Victoria) **Opening Session** **Chairs: Harry Tuller and Sidney Lang**	**Hall B (Meru)**	**Hall C (Mandara)**
09:30 Opening of the Conference **09:45 ABS-270** From Mega- to Milliwatt, from Micro- to Nanostructure: Quo vadis SOFC? Ellen Ivers-Tiffée* **10:15 ABS-031** Biologically Assisted Processing of Electroceramics:The Potential for Three-Dimensional Genetically Engineered Materials and Micro / nano Devices (3-D GEMs) Kenneth H. Sandhage*, Michael R. Weatherspoon, Samuel Shian, Zhihao Bao, Nils Kroger, Mark Hildebrand, et al.,	----------	----------

10:45 - 10:50

Hall A (Victoria) **Micro-Symposium on Solid Oxide Fuel Cells** **Chairs: Harry Tuller and Enrico Traversa**	**Hall B (Meru)** **Micro-Symposium on Mechanisms of Piezoelectric Response Enhancement** **Chairs: Eric Cross and Andy Bell**	**Hall C (Mandara)** **Session on Electroceramic Thin Films** **Chairs: Jon-Paul Maria and Ho-Gi Kim**
10:50 ABS-293 Introduction (Harry Tuller and Enrico Traversa) **11:00 (Invited) ABS-102** Solid Oxide Cell R&D at Risø National Laboratory - and its Transfer to Technology Soren Linderoth* **11:25 (Invited) ABS-284** Determination and Optimization of Reaction Sites on High Temperature Electrodes Tatsuya Kawada*	**10:50 ABS-294** Introduction (Andy Bell and Eric Cross) **11:00 (Invited) ABS-190** Domain Wall Engineering in Lead-free Piezoelectric Materials Satoshi Wada*, Hirofumi Kakemoto, Takaaki Tsurumi **11:25 (Invited) ABS-005** Mechanisms of Piezoelectric Response Enhancement in Relaxor-Ferroelectrics Robert Blinc*, Z. Kutnjak	**10:50 (Invited) ABS-248** Atomic Layer Control and Integrated Nano Technology for Discovery of New Electro-Functional Properties in Oxides Hideomi Koinuma*, Yuji Matsumoto, and Masao Katayama **11:15 (Invited) ABS-232** Pyro- and Piezo-Electric Amorphous Thin Films: Status and Prospects Igor Lubomirsky* **11:40 ABS-019** A Fusion Technology of MOCVD and PVD for

11:50 (Invited) ABS-227 Composite Ceramic/Polymer Proton Conductive Membranes for Proton Exchange Membrane Fuel Cells Serguei N. Lvov*, Mark V. Fedkin, Elena Chalkova, Jorge O. Sofo, Michael L. Machesky and David J. Wesolowski **12:15 (Invited) ABS-243** High Power Density SOFCs through a Single Step Co-firing Process Kyung J.Yoon, Peter Zink, Srikanth Gopalan*, Uday B.Pal and Donald A. Seccombe	**11:50 (Invited) ABS- 198** Free Energy Instability and Enhanced Piezoelectric Response of Ferroelectric Crystals D. Damjanovic*, M. Budimir, M. Davis, N. Setter **12:15 ABS-212** Crystal Symmetry and Structural Dependence of the Non-Linear Voltage Response in Ferroelectrics Richard E. Eitel* **12:30 ABS-249** Octahedral Tilt Transitions in Perovskite Thin Films Daniel S. Tinberg* and Susan Trolier-McKinstry	Flexible Electronic Device Applications of Oxide Thin Films Sang-Yong Jeon, Nak-Jin Seong, Jun Ahn, Soon-Gil Yoon, Jung-Won Lee, In-Hyung Lee, Seung-Eun Lee, Byoung-Ikg Song and Yul-Kyo Chung **11:55 ABS-009** Ferroelectric Films Coated Si Field Emitter Arrays X. F. Chen, Weiguang Zhu*, H. Lu, J. S. Pan, H. J. Bian **12:10 ABS-073** Electrical and Optical Properties of Metal-Insulator-Transition VO_2 Thin Films J. Lappalainen* S. Heinilehto, H. Jantunen, V. Lantto **12:25 ABS-238** Microwave-Excited Plasma Enhanced Metal-Organic Chemical Vapor Deposition with Ion Bombardment Assist Process for Forming Ferroelectric $Sr_2(Ta_{1-x},Nb_x)_2O_7$ (STN) Thin Film I. Takahashi*, M. Hirayama, T. Ohmi

12:40 /12:45 – 14:00 Lunch break

Hall A (Victoria) **Session on Solid Oxide Fuel Cells (Part II)** **Chairs: Harry Tuller and Enrico Traversa**	**Hall B (Meru)** **Micro Symposium on Mechanisms of Piezoelectric Response Enhancement (part II)** **Chairs: Eric Cross and Andy Bell**	**Hall C (Mandara)** **Session on Powders** **Chairs: Heli Jantunen and Marija Kosec**
14:00 ABS-086 The Effect of LSM Coating of STS444 Interconnect on the SOFC Cathode HoJune Hwang, Gyeong Man Choi* **14:15 (Invited) ABS-100** Solid Proton Conductor Based on Poly-Phosphoric Acid for Intermediate Temperature Fuel Cells Z. Ogumi*, T. Abe, Y. Iriyama, N. Kazusa, Y. Kato	**14:00 (Invited) ABS-192** Rotation of Polarization in Morphotropic Ceramics and Thin Films Jean-Michel Kiat* **14:25 (Invited) ABS-285** Progress towards Practical Flexoelectric Piezoelectric Composites L. Eric Cross*, John Y. Fu, Wenyi Zhu, Nan Li **14:50 ABS-021** Relaxor Ferroelectrics and Intrinsic Inhomogeneity Annette Bussmann-Holder*	**14:00 (Invited) ABS-281** Direct Patterning of Nano-Structured Ceramics from Solution: Differences from Conventional Printing and Lithographic Methods Masahiro Yoshimura*, Tomoaki Watanabe, Ruwan Gallage, and Nobuhiro Matsushita **14:25 ABS-062** Eu^{3+}-Doped Gd^{3+} Oxide Nanorods for Luminescent Atomic Force Microscopy Luis Dias Carlos*, Andréia G Macedo, Duarte A Marques, João C Rocha

14:40 ABS-046 Metal Oxide Thin Films for Micro-Solid Oxide Fuel Cells A. Infortuna*, D. Beckel, A. Bieberle, A. Harvey, U. Mücke, J. Rupp, Z. Yang, L.J. Gauckler **14:55 ABS-055** Microfabricated Solid Oxide Fuel Cell Membranes Samuel Rey-Mermet*, Paul Muralt **15:10 ABS-158** Flame Spray Synthesis and Characterisation of Stabilised ZrO_2 and CeO_2 Electrolyte Nanopowders for SOFC Applications at Intermediate Temperatures Andre Heel, Andri Vital, Peter Holtappels, Thomas Graule* **15:25** Discussion (30 minutes)	**15:05 ABS-001** Colossal Values of Permittivity Observed in Nanocrystalline Ceramics Sophie Guillemet*, Zarel Valdez-Nava, Christophe Tenailleau, Thierry Lebey, Bernard Durand, Jean - Yves Chane Ching 15:20 Discussion (30 minutes)	**14:40 ABS-297** Titania Nanotubes Prepared by Synthesis Method for Dye Sensitized Electrochemical Solar Cells. J. Simiyu*, A. Ogacho, J.M. Mwabora, B.O. Aduda, S-E. Lindquist, A. Hagfeldt, G. Boschloo **14:55 ABS-013** Ferroelectric Single-Crystal Nano-Rods Grown within a Nano-Porous Aluminum Oxide Matrix Doron Yadlovker*, Shlomo Berger **15:10 ABS-052** Growth of Self-Catalytic TiO_{2-d} Nanowires Using Metalorganic Chemical Vapor Deposition Hoa Nguyen, Thi Quynh, Sueng-Hee Kang, and Eui-Tae Kim* **15:25 ABS-072** Synthesis of Potassium Niobate Nanoparticles and Thin Film from a Perovskite Nanosheet at Room Temperature Kenji Toda*, Akihiro Iiida, Toshinari Takahashi, Kazuyoshi Uematsu, Mineo Sato **15:40 ABS-181** **Synthesis and Characterization of Mono-crystalline PZT Nanowires** J. Wang*, C.S. Sandu, E. Colla, N. Setter, J. Trodahl, Y. Wang, W. Ma, R. Gysel and M. Kuball

15:50 / 15:55 - 16:20 Break

Hall A (Victoria) **Session on Capacitors and Dielectrics** **Chairs: Danilo Suvarov and Cathy Elissalde**	**Hall B (Meru)** **Session on Lead Free Piezoelectrics** **Chairs: John Yamashita and Paulo Nanni**	**Hall C (Mandara)** **Session on Electroceramic Batteries /Electrochemistry** **Chairs: Srikanth Gopalan and Tatsuya Kawada**
16:20 (Invited) ABS-033 Microcontact Printing of Thin Film Electroceramics Hajime Nagata, Song Won Ko, Eunki Hong, Clive	**16:20 (Invited) ABS-045** Lead-Free Piezoelectric $BaTiO_3$ Ceramics with Large Dielectric and Piezoelectric Constants Manufactured from Nano-Powders	**16:20 (Invited) ABS-047** Correlation between Structure, Composition and Electro-Chemical Response of Mg and Li Insertion Materials

A. Randall, Susan Trolier-McKinstry*, Pascal Pinceloup, Michael Randall, and Azizuddin Tajuddin **16:45 (Invited) ABS-271** Thin Film Dielectrics for Embedded Applications Jon-Paul Maria*, Jon F. Ihlefeld, Patrick R. Daniels, Seymen Aygun, and William J. Borland **17:10 ABS-118** Grain Boundary and Size Effect on the Dielectric, Infrared and Raman Response of $SrTiO_3$ and $BaTiO_3$ Nanoceramics Jan Petzelt*, Tetyana Ostapchuk, Ivan Gregora, Maxim Savinov **17:25 ABS-254** Mg_2SiO_4-TiO_2 Composite Ceramics Prepared by a Liquid Phase Deposition Process I. Kagomiya*, J. Sugihara, K. Kakimoto, H. Ohsato **17:40 ABS-273** Dielectric and Strain Properties of Barrier Layer/Gradient Structures in $BaTiO_3$ Ceramics R.C. Buchanan*, L. Zhou, R. Surana and E. Park	Masatoshi Adachi*, Kang Yan, Toshiyuki Miyamoto **16:45 (Invited) ABS-269** Lead-Free High *T*c $BaTiO_3$-Based PTC Thermistor Ceramics: Fabrication and Properties Tadashi Shiosaki*, Hiroaki Takeda, Takeshi Shimada and Yoshiaki Katsuyama **17: 10 (Invited) ABS-096** Combinatorial Discovery of a Morphotropic Phase Boundary Lead-Free High Tc Piezoelectric Nagarajan Valanoor*, Shige Fujino, Song Hwan Lim, Makoto Murakami, Anbusathaiah Varatharajan, Ichiro Takeuchi **17:35 ABS-085** Temperature Dependence of Ferroelectric and Piezoelectric Properties in Textured $Bi_{0.5}(Na_{0.85}K_{0.15})_{0.5}TiO_3$ Lead-free Ceramics Chang Won Ahn, Euh Duck Jeong , Hai Joon Lee, Ill Won Kim, Young- Hyeok Kim, Jae Shin Lee* **17:50 ABS-195** Crystal Structure and Piezoelectric Properties of $BiFeO_3$-$BaTiO_3$ Ceramics Jeong Seog Kim*, Seok Jun Kim, Hyeung Gyu Lee, Chae Il Cheon	D. Aurbach* and M.D. Levi **16:45 ABS-065** Characterization of Germanium/Cobalt Oxide Multilayer Films as Anode Materials for Lithium-Ion Batteries Seung-ho Ahn, Chae-ho Lim, Jae-Hun Yang, Jong-Wan Park* **17:00 ABS-099** Synthesis and Characterization of $LiNi_{1/3}Co_{1/3}Mn_{1/3}O_2$ by Sucrose Combustion Process Ho-Gi Kim* **17:15 ABS-145** Fast Lithium Ion Conductors for All-Solid-State Lithium Batteries Zhaoyin Wen*, Xiaoxiong Xu, Jingxin Li **17:30 ABS-058** Charge storage at the Pt/YSZ (Yttria-Stabilized Zirconia) Interface György Foti*, Cyril Falgairette, Arnaud Jaccoud and Christos Comninellis **17:45 ABS-049** Novel Nanocrystalline Double Hydroxide Electrodes for Electrochemical Supercapacitors Oleg A. Shlyakhtin, Young-Jei Oh*

18:10 – 19:00 Welcome Reception (offered by Siemens)

19:00 – 21:00 Diner

Wednesday 1 August 2007

Hall A (Victoria) Session on Multiferroics Chair: Hremann Kohlstedt	Hall B (Meru) Session on Tunable Ferroelectrics Chairs: Jan Petzelt and Relva Buchanan	Hall C (Mandara) Micro-Symposium on Piezoelectric Systems for Energy Conversion Chair: Jörg Wallaschek
08:30 (Invited) ABS-191 Spintronics with Multiferroics H.Béa, M. Gajek, G. Herranz*, M. Bibes, K. Bouzehouane, S. Fusil, B. Warot-Fonrose, S. Cherifi, E.Jacquet, C.Deranlot, J-P.Contour, J. Fontcuberta, A. Barthélémy, A. Fert **08:55 ABS-203** Controlling Magnetism with an Electric Field: Exchange Bias with a Magnetoelectric, Multiferroic Antiferromagnet L.W. Martin*, Y.H. Chu, M. Barry, K. Lee, A. Scholl, P.-L. Yang, Q. He, J. Seidel, Q. Zhan, and R. Ramesh **09:10 ABS-252** Phase Diagram Studies in the Multiferroic Bismuth Ferrite-Lead Titanate Andrew J Bell*, Timothy L Burnett, Timothy P Comyn, A.X. Levander, M.A. Khan and S.L. Turner **09:25 ABS-136** Solid-State Synthesis of Single-Phase Polycrystalline $BiFeO_3$, Matjaz Valant*, A-K Axelsson and Neil Alford **09:40 ABS-215** Sol-Gel-Derived Multiferroic $BiFeO_3$ Thin Films. An Overview on Microstructure and Properties M. Es-Souni*, S. Habouti, C-H. Solterbeck **09:55 ABS-178** MBE Growth of Ferroelectric/Ferrmagnetic Multilayered Heterostructure Multiferroics Siddhartha Ghosh*, J.Kabelac, P. Dobal, and R. Katiyar	**08:30 (Invited) ABS-196** Tunable Ferroelectric Capacitors: Potentials, Applications and Challenges S. Gevorgian*, and A. Vorobiev **08:55 (Invited) ABS-200** Multifunctional Microwave Dielectric Composites Hong Wang*, Feng Xiang, Haibo Yang and Xi Yao **09:20 ABS-125** Voltage-Tunable Materials Based on $Na_{0.5}Bi_{0.5}TiO_3$ Relaxor Ferroelectric Danilo Suvorov*, Matjaž Spreitzer, Boštjan Jančar **09:35 ABS-179** Influence of Acceptor and Donor Doping on the Microwave Properties of BST Thick Films W. Menesklou*, F. Paul and E. Ivers-Tiffée **09:50 ABS-151** Flash Sintered BST/MgO Composites for Low Losses Ferroelectric Ceramics, C. Elissalde*, C. Estournes, U-Chan Chung and M. Maglione	**08:30 ABS-292** Introduction (Jörg Wallaschek) **08:45 (Invited) ABS-193** Conversion to Mechanical Linear Motion from RF Electric Power Using Lithium Niobate Minoru Kuribayashi Kurosawa* **09:10 (Invited) ABS-070** Research Trend of Tiny Piezoelectric Linear Motors Applicable to Imaging Devices Hyun-Phill Ko, Chong-Yun Kang, Seok-Jin Yoon* **09:35 (Invited) ABS-219** Materials, structures and power interfaces for efficient piezoelectric energy harvesting Elie Lefeuvre*, Gaël Sebald, Daniel Guyomar, Claude Richard

10:00/10:10 - 10:40 Break

Hall A (Victoria) Micro-Symposium on Ferroelectrics and Interfaces Chair: Nicola Spaldin	Hall B (Meru) Session on Grain Boundaries, Defects and Ionic/Electronic Conduction Chairs: Philippe Knauth and Igor Lubomirsky	Hall C (Mandara) Micro-Symposium on Piezoelectric Systems for Energy Conversion (Part II) Chair: Jörg Wallaschek
10:40 ABS-288 Introduction (Nicola Spaldin) **10:50 (Invited) ABS- 280** Enhancing Ferroelectrics and Multiferroics using Strain D.G. Schlom*, M.D. Biegalski, C.M. Brooks, J.H. Lee, A. Soukiassian, M. Warusawithana, et al. **11:15 ABS-044** Polarization and Lattice Strains in Epitaxial $BaTiO_3$ Films Grown by High-Pressure Sputtering Adrian Petraru*, Nikolay Pertsev, Hermann Kohlstedt, Ulrich Poppe, Axel Solbach, Uwe Klemradt, Rainer Waser **11:30 (Invited) ABS- 282** Polarization-Interface Coupling in Ferroelectric-Electrode Thin Film Heterostructures A.K. Tagantsev*, G. Gerra and N. Setter **11:55 (Invited) ABS- 272** Ultrathin Ferroelectric Films: Phase Stability and Interaction with the Environment Stephen Streiffer*, R.-V. Wang, F. Jiang, P. H Fuoss, D. D Fong, J. A Eastman, K. Latifi, Carol Thompson, G. B Stephenson **12:20 ABS-149** Investigations of the Surface Chemistry of As Grown and CO2 Treated Epitaxial BST Films by Spectroscopic Measurements and Density Functional Theory J.D. Baniecki*, M. Ishii, K. Kurihara, and K. Yamanaka, T. Imada, N. Kin	**10:40 (Invited) ABS-023** Structure-Property Relationships for Grain Boundaries in Acceptor-Doped $SrTiO_3$ Roger Armand DeSouza* **11:15 ABS-166** First-Principles Study of Point Defects in Barium Titanate: Thermodynamics and Electrical Conductivity Paul H. Erhart and Karsten Albe* **11:30 ABS-066** Electrical Conductivity of Ceria Nanoparticles under High Pressure Hiroshi Takamura*, Jumpei Kobayashi, Naomi Takahashi, Masuo Okada **11:45 (Invited) ABS-304** Mixed Valent Ions in Ceria: Impact on Defect Chemistry, Band Structure and Mixed Ionic-Electronic Conductivity Harry Tuller* **12:00 ABS-164** Transport Properties of B-site Substituted $La_{0.5}Sr_{0.5}FeO_{3-d}$ - Perovskite Materials Defne Bayraktar*, Stefan Diethelm, Jan Van herle, Thomas Graule, and Peter Holtappels **12:25 ABS-150** Onsager Reciprocity in Mixed Ionic-Electronic Conduction in $TiO_{2-\delta}$ Han-Ill Yoo* and Doh-Kwon Lee	**10:40 ABS-087** Assembly of Microvalves Actuated by PZT Bender Yannick Fournier*, Thomas Maeder, Peter Ryser **10:55 ABS-101** Piezelectric Bimorph Elements – Commercial Components in Multiple Uses for Teaching and Research Tobias Hemsel*, Bjoern Richter, Martin Klubal, Jens Twiefel **11:10 ABS-182** Non-Linear Electromechanical Behaviour of Piezoelectric Bimorph Actuators: Influence on Performance and Lifetime Daan van den Ende*, B. Bos and W. A. Groen **11:25 ABS-120** Laser Soldering of Piezoelectric Actuator with Minimal Thermal Impact Frank Seigneur*, Thomas Maeder, Jacques Jacot **11:40 ABS-051** Electric Field - Induced Strains in Sol-Gel Up-Graded and Down-Graded $Pb(Zr,Ti)O_3$ Thin Films, Panya Kheanumkhaw, Supasarote Muensit* **11:55 ABS-143** Electromechanical Performance of Structurally Graded Monolithic Piezoelectric Actuator Jaakko Palosaari*, Esa Heinonen, Jari Juuti, Pekka Moilanen and Heli Jantunen **12:10** Discussion (30 minutes)

12:35 / 12:40 - 14:00 Break (Lunch)

Hall A (Victoria) Micro-Symposium on Ferroelectrics and Interfaces (Part II) Chair: Nicola Spaldin	Hall B (Meru) Session on Electroceramics for Optoelectronic & Solar Energy Applications Chairs: Joe Trodahl and Dragan Damjanovic	Hall C (Mandara) Session on Local Methods and Processes Chairs: Igor Stolichnov and Stephen Streiffer
14:00 (Invited) ABS-093 Combining Ferroelectricity, Magnetism, and Superconductivity in Tunnel Junctions Hermann Kohlstedt*, Nicholas A. Pertsev, Adrian Petraru, Ulirich Poppe, R. Waser **14:25 ABS-177** Interfacial Multiferroism and Magnetoelectric Coupling in Nanocapacitors James M Rondinelli*, Massimiliano Stengel, and Nicola A Spaldin **14:40 ABS-014** Ferroelectric and Magnetic Materials in Confined Geometry; Giant Dielectric Response In Sodium Nitrite Nanocomposites Sergey Vakhrushev*, Alexander Naberezhnov, Ekaterina Koroleva, Yury Kumzerov, Alexander Fokin, Dmitry Kurdyukov, Igor Golosovsky, Robert Blinc **14:55** Discussion (30 minutes)	**14:00 (Invited) ABS-228** Smart-Guide Ferroelectric Thin Films for Integrated Optics Peter Günter*, Andrea Guarino, and Gorazd Poberaj **14:25 ABS-180** Optical and Electrooptical Properties of Pressure-less Sintered (Pb,La)TiO_3 Ceramics Fernando A. Londono, Ducinei Garcia and J. A. Eiras* **14:40 (Invited) ABS-194** Charge Transport in Bare TiO_2 thin Films and in Dye-Sensitized Solar Cells: Effect of Film Thickness Sebastian M. Waita, Alex A. Ogacho and Bernard O. Aduda* **15:05 ABS-075** Electrodeposition of $CuInS_2$ In TiO_2 Nanotubes for Application in Solar Cells Romain Cayzac, Yesudas Daniel Premchand, Boulc'h Florence, Thierry Djenizian, Philippe Knauth* **15:20 ABS-126** Microporous Photoluminescent Lanthanides Silicates João Rocha*, Luís D Carlos, Duarte Ananias	**14:00 (Invited) ABS-213** Nanodomain Engineering in Ferroelectric Crystals Using High-Voltage Atomic Force Microscopy Y. Rosenwaks*, D. Dahan, A. Agronin, M. Molotskii, and G. Rosenman **14:25 (Invited) ABS-127** New Insights in Piezoresponse Force Microscopy Tobias Jungk, Akos Hoffmann, Elisabeth Soergel* **14:50 ABS-034** Photochemical Growth of Sliver Particles on PZT S Dunn*, D Gallardo and P Jones **15:05 ABS-170** Surface Plasmon Resonance in Conductive Oxides for Molecular Sensing Mark Losego*, Jon-Paul Maria, Marta Cerruti, Stefan Franzen, Crissy Rhodes, and Alina Efremenko **15:20 ABS-247** Water Molecule Adsorption Properties on Surfaces of MVO_4 (M=In, Y, Bi) Photo-catalysts M. Oshikiri*, Mauro Boero, Akiyuki Matsushita, and Jinhua Ye

15:30 / 15:35 - 18:00 Poster session

The Posters are grouped under the following themes: (i) Ionic and Electronic Conductors and Semiconductors, (ii) Dielectrics, (iii) Ferroelectrics, (iv) Multiferroics, (v) Magnetic ceramics, (vi) Piezoelectrics, (vii) Processing and Microstructure, (viii) Miscellaneous.

The poster presentations are listed at the end of the program description (p. 14-20)

Hall A (Victoria) Plenary session Chairs: Alexander Tagantsev and Darrell Schlom	Hall B (Meru)	Hall C (Mandara)
18:00 ABS-201 In-situ Growth Control of Pulsed Laser Deposited Complex Oxides Dave H.A. Blank* **18:30 ABS-172** Progress and Prospects in Multiferroics Nicola Spaldin*	----------	----------

19:00-21:30 Diner and a Celebration
(A drink offered by S.G.S.)

Thursday 2 August 2007

Conference Tour

07:45 – start from the entrance of the Impala Hotel
08:30 – start from the entrance of the Ngurdoto Mountain Lodge
return to hotels ≈ 18:00

Friday 3 August 2007

Hall A (Victoria) Micro-Symposium on Processing of Electroceramics Chairs: Masahiro Yoshimura and Wanda Wolny	Hall B (Meru) Micro-Symposium on Electroceramics Based Memories Chair: Angus Kingon	Hall C (Mandara) Session on Piezoelectric Properties Chairs: Satoshi Wada and Mohammed Es Souni
08:30 ABS-291 and ABS-290 Introduction Wanda Wolny and Masahiro Yoshimura **08:45 (Invited) ABS-017** Microwave Synthesis and Sintering of Electroceramics: An Overview Dinesh Kumar Agrawal* **09:10 (Invited) ABS-262** Mechanochemical Synthesis of Ceramic Powders for High Performing Ceramics Marija Kosec*, Tadej Rojac, Danjela Kuščer, Janez Holc, Barbara Malič **09:35 ABS-076** Tailoring of Perovskite-Like Oxides: From Nanopowders to Nanocrystalline Dense Ceramics M. T Buscaglia, V. Buscaglia, L. Mitoseriu, Paolo Nanni*, M. Viviani **09:50 ABS-026** Nanoblast Synthesis and SPS of Nanostructured Oxides for SOFC Hanna Borodianska, Oleg Vasylkiv*, Yoshio Sakka	**08:30 ABS-299** Introduction Angus Kingon **08:40 (Invited) ABS-261** Resistive Switching in Oxides – Mysteries and Facts Rainer Waser* **09:05 (Invited) ABS-011** Progress in the Studies of Resistive Memories Based on Solid Electrolytes and Perovskites Zhiguo Liu* **09:30 (Invited) ABS-216** Potential for High Density Self-Assembled Memory Architectures Using Anodic Alumina Templating Robert M. Bowman*, Paul R. Evans, J. McPhillips, Mark McMillen, XinHau Zhu, Paul Baxter, Finlay D. Morrison, James F. Scott, Robert J. Pollard, and J. Marty Gregg **09:55 ABS-255** Fabrication of PZT Nanostructures By Ultra-Thin Anodic Aluminum Oxide (AAO) Mask and Their Characterization Hee Han*, Woo Lee, Dietrich Hesse, Marin Alexe, Ulrich Gösele, and Sunggi Baik	**08:30 (Invited) ABS-037** Effects of Nano-Size Fine Metal Oxide Particle Dopant on the Acoustic Properties of Silicone Rubber Lens for Medical Echo Array Probe Yohachi Yamashita*, Yasuharu Hosono, Kazuhiro Itsumi **08:55 ABS-007** Thermal, Pyroelectric and Dielectric Properties of Porous PZT Ceramics Sidney Lang* and Erling Ringgaard **09:10 ABS-253** An Investigation of Thick PZT Films for Sensor Applications Darko Belavič*, Marko Hrovat, Marina Santo Zarnik, Janez Holc, Jena Cilenšek, Mitja Jerlah, Srečko Maček, Hana Uršič, Marija Kosec **09:25 ABS-064** Grain Oriented Sodium Bismuth Titanate ($Na_{1/2}Bi_{1/2}TiO_3$-$BaTiO_3$) Ceramics Prepared by the Screen-printing Multilayer Grain Growth Technique Mengjia Wu, Yongxiang Li*, Dong Wang, Jiangtao Zeng, Qingrui Yin **09:40 (Invited) ABS-240** Poling Procedures and Domain Switching in Piezoelectric Ceramics Jürgen Rödel*, Alain B.N. Kounga, Torsten Granzow, Emil Aulbach, Thorsten Leist

10:05 /10:10 – 10:40 BREAK

Hall A (Victoria) Micro-Symposium on Processing of Electroceramics (part II) Chairs: Masahiro Yoshimura and Wanda Wolny	Hall B (Meru) Micro-Symposium on Electroceramics Based Memories Chair: Angus Kingon	Hall C (Mandara) Session on Electroceramic MEMS Chairs: Robert Bowman and Ulrich Böttger
10:40 ABS-230 Eliminating Chemical Effects from Thermal Expansion Coefficient Measurements Mirit Ram and Yoed Tsur* **10:55 (Invited) ABS-050** New Synthesis Routes for Lead-free Piezoceramic Precursors Karsten Beck*, Michael Dege **11:20 (Invited) ABS-199** Control of Twin Formation and Design of Micro-structure in Barium Titanate Suk-Joong L. Kang*, Byung-Kwon Yoon and Min-Gon Lee **11:45 ABS-155** On the Sintering of Core@Shell Ferroelectric Nanocomposites U-Chan Chung*, C. Elissalde, C. Estournès, S. Marinel, S. Gomez, S Mornet and M. Maglione **12:00 ABS-020** Dielectric and Ferroelectric Ceramics as Combinatorial Libraries Robert C Pullar*, Yong Zhang, Lifeng Chen, Shoufeng Yang, Julian R Evans, Peter K Petrov, Andrei N Salak, Dmitry A Kiselev, Andrei L Kholkin, Victor M Ferreira, Neil M Alford **12:15** Discussion (25 minutes)	**10:40 (Invited) ABS-035** Low Voltage ZnO Thin Film Transistors Using High-K Gate Dielectrics Il-Doo Kim* **11:05 ABS-239** Ferroelectric Gates for Semiconductor Heterostructures: Low-Dielectric-Constant Materials Igor Stolichnov*, Lisa Malin, Nava Setter **11:20 ABS-188** New Results of the Role of Defects on the Imprint Behavior of Ferroelectric Thin Film Capacitors U. Boettger*, D. Braeuhaus, and R. Waser **11:35 ABS-057** Nanoscale Domain Switching Dynamics in Thin Film Ferroelectric Capacitors Alexei Gruverman*, Dong Wu, Brian J Rodriguez **11:50 ABS-095** Screen Charge Draining Pits in Ferroelectric Thin Films Yunseok Kim*, Simon Bühlmann, Moonkyu Park, Jiyoon Kim, Yong Kwan Kim, Seungbum Hong, Kwangsoo No **12:05** Discussion (30 minutes)	**10:40 (Invited) ABS-210** Piezoelectric Thin Films: Performance and Applications Paul Muralt* **11:05 (invited) ABS-165** Aerosol Deposition - Film Formation, patterning of Piezoelectric Materials and Its Applications Jun Akedo*, Jaehyuk Park, and Hiroki Tsuda **11:30 ABS-002** An Integrated Microelectromechanical Microwave Switch Based on Piezoelectric Actuation Carsten Kügeler*, Alexander Hennings, Ulrich Böttger, Rainer Waser **11:45 ABS-068** Micromachined Piezoelectric Structures for High-Temperature Sensors Jan Sauerwald, Denny Richter, H. Fritze* **12:00 ABS-107** Flexible Pyro- and Piezoelectric $PbTiO_3$/P(VDF-TrFE) Nanocomposite Sensor Arrays Ingrid Graz*, Markus Krause, Norbert Gaar; Jian-Zhang Chen; Bernd Ploss, Stephanie P Lacour, Siegfried Bauer, Sigurd Wagner **12:15 ABS-186** Low Cost and High Performance Optical Micro-scanner Driven with Piezoelectric Thick Film Formed by Aerosol Deposition Jaehyuk Park*, Jun Akedo, Harumichi Sato, and Maxim Lebedev **12:30 ABS-109** Inorganic Polymer Photoresist for Direct Ceramic Patterning by Lithography Techniques Tuan Anh Pham, Dong-Pyo Kim*

12:40 - 14:00 Break (Lunch)

Hall A Luminescent / Thermoelectric / Semiconducting Ceramics Chairs: Peter Günter and Ellen Ivers-Tiffée	Hall B Session on sensors Chairs: Paul Muralt and Weiguang Zhu	Hall C Session on Magnetic Oxides Chairs: Gervasi Herranz and Rainer Waser
14:00 (Invited) ABS-161 Luminescent Ceramics for Medical Radiographic Imaging W. Rossner* **14:25 (Invited) ABS-226** Thermoelectric Ceramic Modules for Electrical Power Generation J.G. Noudem*, S. Lemonnier, M.Prevel, C.S. Sanmathi, A. Veres, D. Chateigner and C. Goupil **14:50 (Invited) ABS-028** Rare-Earth Nitrides: Film Growth and Electron Band Structure Joe Trodahl*, Ben Ruck, Simon Granville, Andrew Preston, Tony Bittar, Grant Williams **15:15 (Invited) ABS-016** Novel Magnetic-Semiconductors in Modified $FeTiO_3$ for Radhard Electronics Raghvendra K. Pandey*, Padmini Periaswamy, Rainer Schad, Jian Dou, Wilhelmus Geerts, Richard Wilkins	**14:00 (Invited) ABS-008** Recent Progress towards Enhancing the Gas Sensitivity of Metal-Oxide Chemoresistors Avner Rothschild* **14:25 ABS-018** The Influence of Alkaline Earth Oxide PVD Surface Layers on the Oxygen Exchange in $Sr(Ti_{1-x}Fe_x)O_{3-\delta}$ Stefan F. Wagner, Wolfgang Menesklou*, Christos Argirusis, Günter Borchardt , Ellen Ivers-Tiffée **14:40 ABS-069** Carbon Nanotube and Tin-Oxide Nano-Composite Gas Sensor of High Sensitivity Nguyen Duc Hoa, Nguyen Van Quy, Yousuk Cho, Dojin Kim* **14:55 ABS-059** Modified Tin Oxide Nanofibers for Gas Sensor Applications Kathy Sahner*, Il-Doo Kim, Harry Tuller **15:10 ABS-104** Study of Nitrogen Dioxide Gas Sensing Characteristics of Thin Films of Tungsten Oxide Ram Pal Tandon*	**14:00 (Invited) ABS-003** Electrically Modulated Magnetoresistance in Perovskite Oxide p-n Heterostructures Huibin Lu*, Kuijuan Jin, Kun Zhao, Meng He, Yanhong Huang, Zhenghao Chen, Yueliang Zhou, Guozhen Yang **14:25 ABS-042** Interfaces of Complex Oxides -What Controls Their Properties? Hans-Ulrich Habermeier* **14:40 ABS-140** Ferromagnetism and Anomalous Hall Effect of TiO_2-based Superlattice Films for Dilute Magnetic Semiconductor Applications Nak-Jin Seong, Juan Jiang, Young-Hun Jo, Myung-Hwa Jung, Jun-Mo Yang and Soon-Gil Yoon **14:55** ABS-159 Microstructure and Magnetic properties of $CoFe_2O_4$ on $SrTiO_3$ Anna-Karin Axelsson, Matjaz Valant, Lesley Cohen, Neil McN. Alford **15:10 ABS-024** Low Temperature Cofirable MnZn Ferrite for Power Electronic Applications Richard Matz*

15:25 / 15:40 - 16:00 Break

Hall A Science & Engineering in the 21st Century: Needs and Perspectives Chairs: Nava Setter and Joseph Tesha	Hall B	Hall C
16:00 (Invited) ABS-299 On the Changing Needs in Science and Engineering Education A. Kingon* **16:30 (Invited)** Reflections on Secondary School Science and Mathematics Education: Its Importance in Grooming Future Scientists K. M. O-Saki* **16:45 (Invited) ABS-302** Relation between Efforts in Science Education and Economic Prosperity as Revealed from the Database of the Human Development Reports and the OECD Reports H. -U. Habermeier* **17:00 (Invited)** Materials Science and Engineering Networking in Africa J. V. Tesha* **17:15 (Invited) ABS-303** The Next Generation: Education and Broadening Participation in Science and Engineering L. D. Madsen* **17:30** Comments **17:40** Farewell **17:45 End**	----------	----------

18:00 transport to the Banquet from the Ngurdoto Mountain Hotel
18: 30 transport to the Banquet from the Impala Hotel

19:00 – 23:00 Banquet (Drinks offered by H. C. Stark GmbH)

23:00 transport back to the hotels

List of Posters
(Presentation on Wednesday 1.8.2007, 15:30 – 18:00)

(i) Ionic and electronic semiconductors (transport properties, structure and interfaces)

ABS-090
Mechanistic Model of p-Type Semiconducting Hydrocarbon Sensors, Kathy C Sahner, Ralf Moos

ABS-097
Sb Doping Effects on Structural and Electrical Properties of p-Type ZnO Thin Films Fabricated By RF Magnetron Sputtering, Dong Hun Kim, Nam Gyu Cho, Hun Park, Ho Gi Kim

ABS-113
Electric Properties of Polycrystalline $BaPbO_3$ Films on Annealing, Hiroshi Naganuma, Kayoko Yamada, Hiromi Shima, Takashi Iijima, Hiroshi Funakubo, Soichiro Okamura

ABS-128
Reassessment of Conventional Polarization Technique to Measure Partial Electronic Conductivity of Electrolytes, Kyung-Ryul Lee, Jong-Ho Lee, Han-Ill Yoo

ABS-146
Influences of Air Flow Rate on the Conductivities of Perovskite-type $CaZr_{0.95}In_{0.05}O_{3-\alpha}$ Ceramics Jinduo Han, Zhaoyin Wen, Jingchao Zhang

ABS-148
Study of Transition Metal Doped Zirconia, Kathy Sahner, Harry Tuller

ABS-176
Electrical and Optical Properties of Sputter Deposited IZTO Thin Films, Hee Young Lee, Jeong-Joo Kim, Viera Vankova, Taeyun Kim, Daniel J. Lichtenwalner, Angus I. Kingon and Robert M. Kolbas

ABS-208
Microstructural and Electrical Conductivity Properties of Cubic Zirconia Ceramics Doped with Various Amount of Titania, S. Tekeli, A. Akçimenb, O.Gürdala and M. Gürüc

ABS-209
Behavior of Individual Dopants in (000-1)|(000-1) Bicrystalline ZnO Model Varistors, Jong-Sook Lee and Joachim Maier

ABS-217
Electrical Conductivity in YSZ Thin Films with Respect to Grain Size, Christoph Peters, André Weber, Wolfgang Menesklou, Ellen Ivers-Tiffée

ABS-242
Structural Characterization and Chemical Stability of Nanocrystalline $La_{0.5}Sr_{0.5}CoO_{3-\delta}$ Cathode Layers Obtained by Sol-Gel Processing, Levin Dieterle, Dagmar Gerthsen, Christoph Peters, Ellen Ivers-Tiffée, Andre Weber, Uwe Guntow

ABS-274
Investigation of a PTCR Effect in The $(Bi_{0.5}Na_{0.5})TiO_3$-$BaTiO_3$ Solid Solution Semiconducting Ceramics, Jong-Hoo Paik, Yong-Jun Park, Mi-Jae Lee, Young-Jin Lee, Chang-Il Kim

ABS-278
Influence of Illumination on Chemisorption Processes in Semiconducting Metal Oxides, George C Whitfield, Avner Rothschild, Harry L Tuller

ABS-305
Thermodynamic and Electronic Properties of Oxide Ceramics by Statistical Moment Method: ZrO_2 and CeO_2 , Vu Van Hung, K. Masuda-Jindo, L. T. M. Tanh, D. C. Trang, and J. Lee

ABS-092
Novel Solid State Microbatteries Based on Embedded Nanostructured Cathodes of Defective Lithium Manganospinels, Deepika Singh, Arul Arjunan, Abhudaya Mishra

(ii) Dielectrics

ABS-048
Re-Examining the Crystal Structures and Dielectric Properties of $MgAl_2O_4$ And $NiAl_2O_4$ Spinels, Chae-il Cheon , Kyoung-Ho Lee, and Jeong Seog Kim

ABS-054
Electrical Behaviors of Lanthanum Oxide Thin Film Deposited by Electron Cyclotron Resonance Atomic Layer Deposition, Myoung-Gyun Ko, Woong-Sun Kim, Tae-Sub Kim, Sang-Kyun Park and Jong-Wan Park

ABS-094
Preparation, Sintering and Microwave Dielectric Characterization of $KxBa_{1-x}Ga_{2-x}Ge_{2+x}O_8$ Ceramics with the $P2_{1/a}$ Structure, Marjeta Macek Kržmanc, Ni Qin, Danilo Suvorov

ABS-117
Dielectric Properties of the Pyrochlore-Type Solid Solutions in the Ternary Systems Bi_2O_3-TiO_2-RE_2O_3 (RE=Y, Nd), Špela Kunej, Danilo Suvorov

ABS-206
Investigation on FTIR Spectra of Barium Calcium Titanate Ceramics, Dazhi Sun, Xueqin Jin, Mingjun Zhang, Yudan Zhu, Juanjuan Qian

ABS-223
One-step Internal Barrier Layer Capacitor Based on A_2FeNbO_3(A=Ba, Sr, and Ca) Perovskites, Shanming Ke, Huiqing Fan, Haitao Huang

ABS-235
Optical Properties of ZnS/CaF_2/ZnS/Cu,Al,Cr Multilayered Thin Film, Nam-Il Lee, Kang-Jae Jang and Gun-Eik Jang

ABS-256
Effect of Ni, Zn and Mn Substitution on the Microwave Dielectric Properties of Cordierite, Hitoshi Ohsato, Mio Terada, Isao Kagomiya, Keizou Kawamura and Ken-Ichi Kakimoto

ABS-275
Microstructure and Luminescent Properties of $Eu_2W_2O_9$ Ceramics and Thin Film, Kyoung Pyo Hong, Kyung-Hoon Cho, Sahn Nahm, Bo-Yoon Jang, Joo-Seok Park and Soon-Jae Yu

(iii) Ferroelectrics

ABS-022
Synthesis of $(Ba_{0.5}Sr_{0.5})(Ti_{1-x}Zr_x)O_3$ Ceramics: Effect of Zr Content on Room Temperature Electrical Properties, S.K Rout, P.K. Barhai, S. Panigrahi, I.W. Kim

ABS-038
Diffuse Phase Transition of BZT Ceramics Prepared through a Modified Chemical Route, S.K Rout, T. Badapanda, S. Panigrahi, T.P. Sinha

ABS-060
$BaLaNb_5O_{15}$: A New Lead-free Relaxor Thin Films with TTB Structure Dominique Michau, Annie SIMON, M. Maglione

ABS-061
Anisotropic Dielectric Behaviour of SBN Single Crystal, Annie Simon*, Jean Ravez, Mario Maglione, Gi-Tae Joo

ABS-067
Direct Fabrication of Tunable One-dimensional Metamaterials in GHz Frequency by Ink-jet Printing, Zhuo Wang, Yongxiang Li, Jianbo Wang, Z. Y. Zhao

ABS-081
ZnO Based Surface Acoustic Wave Ultraviolet Photo Sensor, Sanjeev Kumar, Gil-Ho Kim, and R. P. Tandon

ABS-083
Influence of Annealing Temperature on the Structure and Microwave Properties of $(Ba,Sr)TiO_3$ Thin Films on Sapphire Substrates, Kwang-Hwan Cho, Dong-Soo Paik, Chong-Yun Kang, Young-Pak Lee, Seok-Jin Yoon

ABS-089
1/f Noise and Dynamical Heterogeneity in the Ceramics of PMN-PZT System, Andrei Tsotsorin, Stanislav A Gridnev

ABS-112
The influence of crystallization temperature of LSCO on the fatigue and microstructural characteristics of the PZT 53/47 capacitors with LSCO/Pt electrodes, Saša Javorič[1,*], Goran Dražič[2], Marija Kosec[3], Slavko Amon[4], Jože Furlan[4],

ABS-139
Optical Properties of $Pb(Zr,Ti)O_3$ Films Prepared by Aerosol Deposition, Hiroki Tsuda, Masafumi Nakada, Jun Akedo and Keishi Ohashi

ABS-147
Ferroelectric properties of $SrBi_2Ta_2O_9$ thin films on Si(100) with $LaZrO_x$ buffer layer, Jong-Hyun Im, Ho-Seung Jeon, Joo-Nam Kim, Dong-Won Kim, Byung-Eun Park and Chul-Ju Kim

ABS-171
Dielectric Spectroscopy of 0.75 BBN – 0.25 SBN Ceramics, P. Keburis, J. Banys, A. Brilingas, J. Prapuolenis, Vytautas Samulionis, A. L. Kholkin and M. E. V. Costa

ABS-185
Stability of perovskite-type phase in crystalline PMN-PT, Zengzhe Xi, Wei Long, Zhenrong Li, Zhuo Xu and Xi Yao

ABS-225
Enhancement of Dielectric Properties by Optimization of Sintering Condition in Tungsten-Bronze Structured $Ba_5SmTi_3Nb_7O_{30}$ Ferroelectric Ceramics, Prasun Ganguly, A.K.Jha and K.L.Deori

ABS-295
Characteristics of PLT Thin Films Prepared by Sol-Gel Processing, H. H. Kim, D. H. Park and K. J. Lim

(iv) Multiferroics

ABS-079
Effect of annealing temperature on ferroelectric and magnetic properties in Mn-doped $BiFeO_3$ films, Hiroshi Naganuma, Jun Miura, Soichiro Okamura

ABS-080
Inducing Multiferroic Behavior in Tri-color Superlattices: A First Principles Study, Alison J Hatt, Nicola A Spaldin

ABS-141
Dielectric and magnetic properties of perovskite-type oxyfluoride, xPbTiO$_3$-(1-x)PbFeO$_2$F, Tetsuhiro Katsumata, Akihiro Takase, Masashi Yoshida,Yoshiyuki Inaguma, and John E. Greedan

ABS-157
Sol-gel Synthesis of $BiFeO_3$ Thin Films, Michelle Casper, Mark Losego and Jon-Paul Maria

ABS-202
Determination of Magnetic Directions in $BiFeO_3$/Ferromagnet Films, M.E. Barry, K. Lee, Y.H. Chu, L.W. Martin, P.L. Yang and R.Ramesh, A. Scholl, A. Doran, and A. Fraile-Rodriguez

ABS-204
Nanoscale Ferroelectric Domain Control in Multiferroic BiFeO3 Thin Films, L.W. Martin, Y.-H. Chu, M. Barry, M. Huijben, P.-L. Yang, Q. Zhan, and R. Ramesh

ABS-296
Single Domain Epitaxial Thin Films of CaRuO3 For Multiferroic Electrodes, Danielle Proffit, Ho Won Jang, and Chang-Beom Eom

(v) Magnetic materials

ABS-084
Synthesis and Characterization of a Specific Permanent Magnet in Nd-Fe-B System with Microwave Sintering Technology, Jian Zhou, Lin Wang, Hai Ge, Guizhen Liu

ABS-153
Magnetism and dielectric properties in $RTiO_3$ thin films, C. U. Jung

ABS-162
Preparation, thermal stability and permeability behavior of Z-type Hexagonal Ferrites for multilayer inductors, S. Kračunovska, J. Töpfer

(vi) Piezoelectric – structure, properties and devices

ABS-056
The Amorphous to Crystalline Phase Transistion of Chemical Solution Deposited $PbZr_{0.3}Ti_{0.7}O_3$ Thin Films Studied by Soft X-Ray Spectroscopy, Hermann Kohlstedt, Timothy Learmonth, Theo Schneller, Jinghua Guo, Jonathan Denlinger, Adrain Petraru, Per-Anders Glans, Rainer Waser, Ramamoorthy Ramesh, Kevin E. Smith

ABS-098
Design and performances of high torque ultrasonic motor for application of automobile, Kee-Joe Lim, Heun Cheong, Jinheon Oh, Seunghee Park, Jongsup Lee, Hyun Hoo Kim, Boohyung Ryu, Daehee Park

ABS-105
Design of Ultrasonic Motor Capable of the Single Phase Driving, Jons-Sub Lee, Bok-Won Kim, Se-Hyung Lee, Kee-Joe Lim, Hea-Yun Jung

ABS-106
Design and Characteristics of High Efficient Piezoelectric Transformer for Fluorescent Lamp Ballast, Jons-Sub Lee, Bok-Won Kim, Se-Hyung Lee, Kee-Joe Lim, Hea-Yun Jung

ABS-108
Phase Diagram of $(1-x)(K_{0.5}Na_{0.5})NbO_3$-$xLiNbO_3$ ($0 \le x \le 0.1$), Naama Klein, Dragan Damjanovic, H. J Trodahl, Nava Setter, Martin Kuball, Pascale Gemeiner, Brahim Dkhil

ABS-116
Design and Performances of Micro-Pump for Application of Micro Fuel Cells, Kee-Joe Lim, Heun Cheong, Jinheon Oh, Seunghee Park, Jongsup Lee, Hyun Hoo Kim, Boohyung Ryu, Daehee Park

ABS-132
PNN-PZT Thick Film with Large Piezoelectric Constant Deposited on YSZ and Stainless Steel Substrate by Aerosol Deposition, Yoshihiro Kawakami and Jun Akedo

ABS-144
Fundamental study on the ultrasound probe fabricated by the aerosol deposition method or hydrothermal method, Akito Endo, Jun Akedo, Shinichi Takeuchi

ABS-160
Piezoelectric and Elastic Properties af Layered Materials of $Cu(In,Cr)P_2(S,Se)_6$ System, V.Samulionis, J.Banys and Yu. Vysochanskii

ABS-167
On the Role of Defect Associates for Ageing and Fatigue: First-Principles Calculations and Kinetic Modeling of Lead Titanate, Paul H. Erhart, Petra Träskelin, Rüdiger Eichel and Karsten Albe

ABS-207
Dielectric Property of Ferroelectric Lead Titanate Zirconate Ceramics with Graded Composition, Dazhi Sun, Jie Zhu, Xiaolu Wang, Yudan Zhu, Lanlan Zhang

ABS-245
Silver Diffusion During Sintering in Multilayer Ceramic Capacitors and Actuators, W.A. Groen, R. Mikkenie, R.J.A. van de Drift, Y.C. Lee, W. Chuang

ABS-246
Dependence of Piezoelectric Properties on Layer Thickness for Multilayer Actuators, W.A. Groen

ABS-267
Hybrid Piezoelectric-Composite Diskbenders: Extending their Application Capabilities, Enrico Colla, Dragan Damjanovic, Yongli Wang and Nava Setter

ABS-229
Lifetime of Piezoceramic Multilayer Actuators: Interplay of Material Properties and Actuator Design, Daan Anton van den Ende, Bart Bos, W A Groen, L.M.J.G. Dortmans

(vii) Processing, microstructure, and their effect on properties

ABS-004
Photocatalytic Removal of TOC from Aqueous Phenol Solution using Solution Combusted ZnO, Sung Park, Ju-Hyeon Lee, Kang Yoo, Hye-Jung Park, Yun-Joong Chung, Jae Chun Lee

ABS-082
Effect of Oxygen Pressure on Microstructure of the ZnO Thin Film Deposited by PLD, Guizhen Liu, Yong He, Lin Wang, Jian Zhou

ABS-091
Electrophoretic Deposition of PZT 53/47 Nanolayers: the Effect of Sol Parameters, Amaury Suarez-Gomez, Jose M Saniger-Blesa

ABS-121
Dielectric studies of nano-sized Lanthanum modified $Pb(Zr,Ti)O_3$ ceramics prepared by high energy ball milling, Ram P Tandon, Prikshit Gautam, Navin C Mehra, Ravi Kumar

ABS-154
Sol-gel Routes for the Synthesis of Aluminium Titanate-Based Composite Powders, Maria Luisa Di Vona, Riccardo Polini, Paolo Sebastianelli, Silvia Licoccia

ABS-184
Microwave processing of electroceramic materials and devices, Chris Y. Fang, Clive Randal, Michael Lanagan, K. Agrawal, Carlo G. Pantano

ABS-189
High energy ball milling of ceramics for use as dielectric resonators, Vera Lucia Arantes* Hugo Watanabe Kabayama, Henry Antunez, and Ana P. Correa

ABS-211
Characteristics of Organic-Inorganic Hybrid Thick Film Synthesized from Colloidal Silica-Silane Sol, Hoy Yul Park, In Hye Myung, Moon Kyong Na, Dong Pil Kang, Seog Young Yoon, Seong Soo Park

ABS-218
Sintering and Optimizing Design of the Microstructure of Sol-Gel Derived $BaTiO_3$ Ceramics by Artificial Neural Networks, Huiqing Fan* and Laijun Liu

ABS-276
Fabrication and I-V properties of ZnO varistor prepared by inorganic binders, Gurong Li, Yeke Li, Liaoying Zheng, Zheng Yao, Aili Ding, Qingrui Yin

ABS-283
Direct Fabrication of Crystalline Ceria Films and Patterns by Ink-jet Deposition at Moderate Temperatures, Ruwan Gallage, Atsushi Matsuo, Takeshi Fujiwara, Tomoaki Watanabe, Nobuhiro Matsushita and Masahiro Yoshimura

ABS-298
Effects of ZnO Nanopowder Dispersion on Photocatalytic Reactions for the Removal of Ag ions from Aqueous Solution, Sung Park , Ju-Hyeon Lee, Kang Yoo, Hye-Jung Park and Jae Chun Lee

(viii) Miscellaneous

ABS-138
Electrothermal Properties of Regenerable Carbon Contained Porous Ceramic Fiber Media, Jae Chun Lee, Young-Pil Kwon, Hyuck-Chon Kwon, Jung-Hyuck Park and Sung Park

ABS-152
Magnetism in $Si_{1-x}Mn_x$ Diluted Magnetic Semiconductors Grown by MBE, Tran Thi Lan Anh, Sang Soo Yu, Young Eon Ihm, Dojin Kim, Hyojin Kim and Soon Ku Hong

ABS-260
Optimizing the Pressing Conditions for Manufacture of TF and PF-bonded Rice Husks Particleboards, B.S. Ndazi, C.W. Nyahumwa, J.V. Tesha

ABS-268
Properties of Low Temperature and Pressing Pressure Fired Kaolinite Fireclay Refractory Bricks, M.N. Lugoye, J.V. Tesha

ABS-279
Self-compacting Water Proof Concrete, Houxiang Li, Anqing Wu, Sanhai Zeng, Yueshun Chen, Lin Wang, Guizhen LIU, Jian Zhou

ABS-264
Ceramics Collaborations around the World, Lynnette D. Madsen

ABS-287
Materials Research and Education at the University of Ghana Elsie Effah Kaufmann, R. D. Baeta, M. Egblewogbe and S. K. Sefa-Dedeh