

Electroceramics XII - Program and sessions

Sunday June 13

14:00-17:00	Training courses, Realfagbygget, Gløshaugen Campus, NTNU
16:00-18:00	Registration, Realfagbygget
18:00-20:00	Reception, Realfagbygget

Monday June 14

Time	Room R2	Room R5	Room R8	Room R9
08:15-08:30	Opening of conference , room R1			
08:30-09:15	Keynote lecture 1, room R1			
09:30-10:30	Session 1	Session 2	Session 3	Session 4
10:30-10:50	Coffee break			
10:50-12:20	Session 1, continues	Session 2, continues	Session 3, continues	Session 4, continues
12:20-13:30	Lunch			
13:30-15:30	Session 5	Session 6	Session 7	Session 8
15:30-16:30	Coffee			
16:00-18:00	Poster session 1			
19:30	Reception Ringve Museum, bus from Hotel 19:15			

Tuesday June 15

Time	Room R2	Room R5	Room R8	Room R9
08:30-09:15	Keynote lecture 2, room R1			
09:30-10:30	Session 9	Session 10	Session 11	Session 12
10:30-10:50	Coffee break			
10:50-12:20	Session 9, continues	Session 10, continues	Session 11, continues	Session 12, continues
12:20-13:30	Lunch			
13:30-15:30	Session 13		Session 14	Session 15
15:30-16:00	Coffee			
16:00-18:00	Poster session 2			
19:30	Conference banquet, Hotel Rica Nidelven			

Wednesday June 16

Time	Room R2	Room R5	Room R8	Room R9
08:30-09:15	Keynote lecture 3, room R1			
09:30-10:30	Session 16	Session 17	Session 18	Session 19
10:30-10:50	Coffee break			
10:50-12:20	Session 16, continues	Session 17, continues	Session 18, continues	Session 19, continues
12:20-13:30	Lunch			
13:30-15:30	Session 20	Session 21	Session 22	Session 23
15:30-16:00	Closing of the conference, room R1			

Plenary keynote lectures

Monday June 14 – room R1

Chair:

08:30-9:15 **Ionic Liquids conquered the field of inorganic synthesis**
Jean-Marie Tarascon, Université de Picardie Jules Verne, France

Tuesday June 15 – room R1

Chair: Marija Kosec

08:30-9:15 **Lead-free piezoelectric ceramics of perovskite and bismuth layered-structured ferroelectrics**
Tadashiki Takenaka, Tokyo University of Science, Japan

Wednesday June 16 – room R1

Chair:

08:30-9:15 **Using density functional theory to design new multiferroics. From nanoelectronics to the origin of the universe**
Nicola Spaldin, University of California, Santa Barbara, USA

Session 1: Basic Science I

Session Date: 14.06.2010

Session Time: 0930-1220

Room: Auditorium R2

Chair: Henny J.M. Bouwmeester

Co-chair: Iñigo Bretos

Time	Abstract#	
09:30-10:00	278	Invited: Understanding and Controlling Microstructure Evolution in Lead-Free Piezoelectric Sodium Potassium Niobate Ceramics <u>Barbara Malic</u> , Andreja Benčan, Jurij Koruza, Sebastjan Glinsek, Tadej Rojac, <i>Jozef Stefan Institute, SLOVENIA</i>
10:00-10:15	46	Coexistence of A- and B-site vacancy compensation of the perovskite phase in the (Sr_{1-x}Ba_x)O – La₂O₃ – TiO₂ quasi-ternary system <u>Taras Kolodiazhnyi</u> , Lin Wang, Yoshio Sakka, <i>National Institute for Materials Science, JAPAN</i>
10:15-10:30	211	New Crystallochemical Criteria for Analyzing Fluorite-related (A₂B₂O₇) Electroceramics Lu Cai Alex Arias, <u>Juan Claudio Nino</u> , <i>University of Florida, USA</i>
10:30-10:50		Coffee break
10:50-11:05	70	Structural characterization of nanocrystalline BiMO₃-PbTiO₃ perovskites by advanced TEM techniques <u>Teresa Hungria</u> , Florent Houdellier, Miguel Alguero, Alicia Castro <i>Instituto de Ciencia de Materiales de Madrid (ICMM) CSIC, SPAIN</i>
11:05-11:20	17	Plasma polymerized fullerene C₆₀ thin film as a coating material for silicon film anodes in lithium secondary batteries <u>Arenst Andreas Arie</u> , Joong Kee Lee, <i>Korea Institute of Science and Technology SOUTH KOREA</i>
11:20-11:35	201	Artificial Neural Network Based Prediction for Mechanical Properties of BHA-Li₂O Composites Hasan Huseyin Celik, Oguzhan Gunduz, <u>Faik Nuzhet Oktar</u> , Nazmi Ekren, Simeon Agathopoulos, <i>Marmara University, TURKEY</i>
11:35-11:50	306	Cation transport studies of Samarium (Sm) dopant diffusion into polycrystalline CeO₂ <u>Christian Rockenhäuser</u> , Benjamin Butz, Dagmar Gerthsen, Nicole Schichtel, Carsten Korte, <i>Karlsruher Institut für Technologie (KIT), GERMANY</i>
11:50-12:05		
12:05-12:20	84	The electric properties of Pb(Zr,Ti)O₃/ZnO heterostructure grown on platinum/silicon substrate Viorica Stancu, <u>Cristina Dragoi</u> , Roxana Radu Eugeniu Vasile Ioana Pintilie, <i>National Institute of Material Physic, ROMANIA</i>

Session 2: Piezoelectric materials I

Session Date: 14.06.2010

Session Time: 0930-1220

Room: Auditorium R5

Chair: Robert Freer

Co-chair: Tim Burnett

Time	Abstract#	
09:30-10:00	508	Invited: Are lead-free piezoelectrics inferior to lead-based? <u>Dragan Damjanovic</u> , <i>Swiss Federal Institute of Technology – EPFL, SWITZERLAND</i>
10:00-10:15	250	Electric Field Induced Phase Transitions in Single Crystal PMN-PT <u>Markys Cain</u> , Jenny Wooldridge, Mark Stewart, Mike Reece, Matthias Gutmann, <i>National Physical Laboratory, UK</i>
10:15-10:30	85	High Curie temperature morphotropic phase boundary BiScO₃-PbTiO₃ ceramics by mechanosynthesis: Processing and functionality <u>Miguel Algueró</u> , Pablo Ramos, Ricardo Jiménez, Harvey Amorín, Teresa Hungría, Jesús Ricote, Eladio Vila, Alicia Castro, <i>Instituto de Ciencia de Materiales de Madrid, CSIC, SPAIN</i>
10:30-10:50		Coffee break
10:50-11:05	165	Defect structure - piezoelectric property relationships for PZT and lead-free materials <u>Ruediger-A. Eichel</u> , <i>University Freiburg, GERMANY</i>
11:05-11:20	350	Dielectric, pyroelectric and piezoelectric studies of morphotropic phase boundary in PbFe_{1/2}Nb_{1/2}O₃-PbTiO₃ ceramics <u>Evgeny Sitalo</u> , A. Lutokhin, Igor Raevski, Yu. Zakharov S. Kubrin, <i>Research Institute of Physics of the Southern Federal University, RUSSIA</i>
11:20-11:35	228	Influence of ZrO₂ Addition on Microstructure, Structure, Electrical and Mechanical Properties of PZT Ceramics <u>Andreja Benčan</u> , Barbara Maliè, Jenny Tellier, Marija Kosec, Kyle Webber, <i>Jozef Stefan Institute, SLOVENIA</i>
11:35-11:50	158	Large area deposition of PZT on Si Wafers <u>Matthijn Dekkers</u> , Ruud Steenwelle, Dave Blank, Guus Rijnders, Arjen Janssens, <i>University of Twente, THE NETHERLANDS</i>
11:50-12:05	159	Oxide ion transport in Pb(Zr,Ti)O₂ (PZT) investigated by ¹⁸O tracer diffusion experiments with ToF SIMS <u>Till Froemling</u> , Herbert Hutter, Jörgen Fleig, <i>Vienna University of Technology, AUSTRIA</i>
12:05-12:20	174	Strontium B-Site Occupancy in Solid Solutions of Lead Zirconate-Titanate and Tristrontium Tungstate <u>Klaus Reichmann</u> , Corwin Booth, <i>Graz University of Technology, AUSTRIA</i>

Session 3: Ionic, electronic and mixed conducting materials I

Session Date: 14.06.2010

Session Time: 0930-1220

Room: Auditorium R8

Chair: Enrico Traversa

Co-chair: Dr Marie-Laure Fontaine

Time	Abstract#	
09:30-10:00		Invited: High lithium ion conducting glass-ceramic electrolytes for all-solid-state batteries <u>Masahiro Tatsumisago</u> , Akitoshi Hayashi, <i>Osaka Prefecture University, JAPAN</i>
10:00-10:15	97	Phase transitions in oxygen conducting bismuth vanadate-based solid solutions <u>Ekaterina Politova</u> , Igor Golosovskii, Elena Fortalnova, Natalia Golubko, Galina Kaleva, <i>Karpov Institute of Physical Chemistry, RUSSIA</i>
10:15-10:30	262	Oxygen nonstoichiometry and charge transfer in double perovskite $\text{GdBaCo}_{1.8}\text{Fe}_{0.2}\text{O}_{6-\delta}$ <u>Dmitry Tsvetkov</u> , Vladimir Sereda, Nadezhda Saricheva, Andrey Zuev, <i>Ural State University, RUSSIA</i>
10:30-10:50		Coffee break
10:50-11:05	331	Grain boundaries as barriers to the oxygen transport in perovskite-type membranes <u>Armin Feldhoff</u> , Konstantin Efimov, Tobias Klande, Julia Martynczuk, <i>Leibniz Universität Hannover, GERMANY</i>
11:05-11:20	107	Effect of A-site substitution on structure peculiarities and ionic conductivity of solid electrolytes $\text{La}_{0.5}\text{Li}_{0.5-y}\text{Na}_y\text{Nb}_2\text{O}_6$ <u>Anatolii Belous</u> , Oksana Gavrilenko, Oleg V'yunov, Sofiya Kobylanska, <i>V.I.Vernadskii Institute of General & Inorganic Chemistry, UKRAINE</i>
11:20-11:35	315	Decomposition of yttria-doped zirconia and its contribution to the degradation of ionic conductivity Benjamin Butz, Reinhard Schneider, <u>Heike Störmer</u> , Dagmar Gerthsen, Marco Schowalter, Andreas Rosenauer, <i>Karlsruhe Institute for Technology, GERMANY</i>
11:35-11:50	219	Characterization of Ion-Conducting Thin Films Grown by Pulsed Laser Deposition (PLD) <u>Daniele Pergolesi</u> , Emiliana Fabbri, Daniele Marre', Emilia Bellingeri, Enrico Traversa, <i>National Institute for Materials Science (NIMS), JAPAN</i>
11:50-12:05	391	Ceria/Carbonate Composite Electrolytes Performance <u>Fernando Marques</u> , Saradha Thangavelu, Filipe Figueiredo, <i>University of Aveiro, PORTUGAL</i>
12:05-12:20	102	Tuning the grain boundary conduction mechanism in nanocrystalline CeO_2 <u>Giuliano Gregori</u> , Piero Lupetin, Behnaz Rahmati, Wilfried Sigle, Peter van Aken, <i>Max-Planck-Institut für Festkörperforschung, GERMANY</i>

Session 4: Thin films I
Session Date: 14.06.2010
Session Time: 0930-1220
Room: Auditorium R9
Chair: Tseung-Yuen Tseng
Co-chair: Matjaz Valant

Time	Abstract#	
09:30-10:00	423	Invited: Nanoscale phenomena in ferroelectrics and multiferroics Marin Alexe, <u>Dietrich Hesse</u> , Ionela Vrejoiu, <i>Max Planck Institute of Microstructure Physics, GERMANY</i>
10:00-10:15	40	Effect of the Electrode Structure on the Electrical Properties of alkoxide derived PZT film <u>Tomoya Ohno</u> , Takeshi Matsuda, Naonori Sakamoto, Naoki Wakiya, Hisao Suzuki, <i>Kitami Institute of Technology, JAPAN</i>
10:15-10:30	42	Properties of low-temperature processed PbTiO₃ thin films prepared by solution photo-activation and UV-assisted rapid thermal processing Nekane Martin, Rafael Sirera, Maria Lourdes Calzada, Íñigo Bretos, Ricardo Jiménez, <i>Consejo Superior de Investigaciones Científicas, SPAIN</i>
10:30-10:50		Coffee break
10:50-11:05	41	Deposition of PZT Thin Films on Copper-coated Polymer Substrates by Means of Reactive Sputtering <u>Gunnar Suchanek</u> , Oleg Volkonskiy, Alexandr Levin, Barbara Adolphi, Gerald Gerlach, <i>TU Dresden, GERMANY</i>
11:05-11:20	276	Tensile strain induced changes in the optical spectra of SrTiO₃ epitaxial thin films: spectral ellipsometric study <u>Vladimir Trepakov</u> , Alexandr Dejneka, Marina Tjunina, Janne Narkilachti, Dagmar Chvostova, <i>Institute of Physics AS CR, CZECH REPUBLIC</i>
11:20-11:35	140	Microstructure of epitaxial SrRuO₃ thin films on SrTiO₃ and LaAlO₃ substrates Yisong Han, Ian M. Reaney, Daniel S. Tinberg, Susan Trolier-McKinstry, <u>Shu Miao</u> , <i>University of Sheffield, UK</i>
11:35-11:50	198	Thin film deposition by ultrasonic aerosol assisted chemical vapor deposition (UAA-CVD): Thin film growth and microstructure <u>Meike V.F. Schlupp</u> , Jennifer L.M. Rupp, Anja Bieberle-Hütter, Ludwig J. Gauckler, <i>ETH Zürich, SWITZERLAND</i>
11:50-12:05	32	Direct measurements of giant electrocaloric effect in thick and thin films of ferroelectric relaxor ceramics <u>Brigita Rozic</u> , Barbara Malic, Hana Ursic, Janez Holc, Marija Kosec, <i>Jozef Stefan Institute, SLOVENIA</i>
12:05-12:20	410	Solute Drag in Crystallization and Grain Growth of Ceria-based Ceramics: Sintered Pellets and Thin Films <u>Jennifer L. M. Rupp</u> , Barbara Scherrer, Julia Martynczuk, Ashley Harvey Ludwig J. Gauckler, <i>ETH Zürich, SWITZERLAND</i>

Session 5: Sensors and Actuators

Session Date: 14.06.2010

Session Time: 1330-1530

Room: Auditorium R2

Chair: José Arana Varela

Co-chair: Henrik Ræder

Time	Abstract#	
13:30-13:45	329	Microstructure and Gas-sensing Properties of Nanocrystalline WO₃ Thin Films <u>Jyrki Lappalainen</u> , Roman Viter, Dmytro Gornostayev, Jarkko Puustinen, Valentin Smyntyna, <i>University of Oulu, FINLAND</i>
13:45-14:00	47	Assessment of different compression test setups for the (electro-) mechanical characterization of piezo-ceramics and multilayer actuators <u>Holger Schwaab</u> , Hannes Grnbichler, Clemens Krautgasser, Marc Kamlah, Peter Supancic, <i>Karlsruher Institut für Technologie, GERMANY</i>
14:00-14:15	466	Thick film acoustic emission sensors for embedded structural health monitoring systems. <u>Andrew Pickwell</u> , David Mba, Robert Dorey, <i>Cranfield University, UK</i>
14:15-14:30	326	Complex electrode patterning by laser ablation for advanced piezoelectric sensors and actuators <u>Rhodri Lewis</u> , Stephan Kloss, Andrew Dent, Chris Bowen, Jonathan Shephard, <i>University of Bath, UK</i>
14:30-14:45	120	Influence of hydrothermal synthesis conditions and device configuration on the photoresponse of ZnO nanorods Raluca Savu, Rodrigo Parra, <u>Ednan Joanni</u> , Bostjan Jančar, <i>UNESP Araraquara, BRAZIL</i>
14:45-15:00	378	Modeling and Optimization of Catalyst-Enhanced Nanostructured Metal Oxide Gas Sensors <u>George Whitfield</u> , Dae Jin Yang, Il-Doo Kim, Harry Tuller, <i>Massachusetts Institute of Technology, USA</i>
15:00-15:15	246	Novel Method for the Measurement of Voltage-Strain-Curves of Piezoceramic Single Fibers <u>Uwe Scheithauer</u> , Bent Brueckner, Thomas Bettermann, Philipp Schulz, Andreas Schoenecker, <i>TU Dresden, GERMANY</i>

Session 6: Piezoelectric materials II

Session Date: 14.06.2010

Session Time: 1330-1530

Room: Auditorium R5

Chair: Jacob L. Jones

Co-chair: Andreja Benčan

Time	Abstract#	
13:30-13:45	225	Field-induced morphotropic phase boundary in BNT-xBT lead-free piezoceramics <u>Wook Jo</u> , John Daniels, Jacob Jones, Juergen Rödel, <i>Technische Universitat Darmstadt, GERMANY</i>
13:45-14:00	184	New high-temperature piezoelectric ceramics <u>Iasmi Sterianou</u> , Tutu Sebastian, Ian Reaney, Wook Jo, Jürgen Rödel, <i>University of Sheffield, UK</i>
14:00-14:15	376	Piezoelectric bioceramics - from design to synthesis <u>Andrew Dent</u> , Chris Bowen, Rhodri Lewis, Irene Turner, <i>University of Bath, UK</i>
14:15-14:30	310	Porous piezoelectric ceramics - a historical overview <u>Andrey N. Rybyanets</u> , <i>Southern Federal University, RUSSIA</i>
14:30-14:45	469	Quantification of Piezoresponse Force Microscopy using electron backscatter diffraction <u>Tim Burnett</u> , Paul Weaver, John Blackburn, Markys Cain, <i>National Physical Laboratory, UK</i>
14:45-15:00	320	Sc_xAl_{1-x}N(0001) - investigation of structural and electrical properties of sputter deposited thin films <u>Gunilla Wingqvist</u> , Agne Zukauskaitė, Ferenc Tasnádi, Carina Höglund, Björn Alling, I. Abrikosov, J. Birch, L. Hultman, <i>Linköping University, SWEDEN</i>
15:00-15:15	53	Tetragonal distortion and its influence on domain switching in La-doped BiFeO₃-PbTiO₃ high temperature piezoceramics <u>Thorsten Leist</u> , Wook Jo, Torsten Granzow, Jürgen Rödel, Anderson D. Prewitt, <i>Technische Universität Darmstadt, GERMANY</i>
15:15-15:30	43	Thermal diffusivity measurements by differential LMM <u>Alena Movchikova</u> , Gunnar Suchanek, Reinhard Koehler, Gerald Gerlach, <i>Tver State University, RUSSIA</i>

Session 7: Ionic, electronic and mixed conducting materials II

Session Date: 14.06.2010

Session Time: 1330-1530

Room: Auditorium R8

Chair: Fernando Marques

Co-chair: Ekaterina Politova

Time	Abstract#	
13:30-14:00	409	Invited: Microstrain and Oxygen Ion Conductivity of Thin Films <u>Jennifer L.M. Rupp</u> , Julia Martynczuk, Anja Bieberle-Hütter, Ludwig J. Gauckler, <i>ETH Zürich, SWITZERLAND</i>
14:00-14:15	479	Dense membrane reactor based on bismuth molybdates for the C2-C3 hydrocarbon oxidation under current polarisation <u>Caroline Pirovano</u> , Chanapa Kongmark, Rachel Coulter, Lucile Gouzerh, Axel Löfberg, <i>UCCS UMR CNRS 8181 USTL-ENSCL-ECL, FRANCE</i>
14:15-14:30	125	Investigation on Doping Perovskite Mixed Ionic Electronic Conductor <u>Hong-Yi Chang</u> , Shing-Hoa Wang, Chien-Wei Lai, <i>National Taiwan Ocean University, TAIWAN</i>
14:30-14:45	501	Mixed Conductive Properties of Oxygen Permeable $\text{Sr}_{3-x}\text{La}_x\text{FeCoO}_{7-\delta}$ Ceramic Membrane <u>Isao Kagomiya</u> , Masaya Suzumura, Ken-ichi Kakimoto, Hitoshi Ohsato, <i>Nagoya Institute of Technology, JAPAN</i>
14:45-15:00	49	Mixed conductivity, electrochemical properties and stability of Fe-substituted $(\text{La,Sr})(\text{Cr,Mg})\text{O}_{3-\delta}$ <u>Aleksey Yaremchenko</u> , Vladislav Kharton, Vladislav Kolotygin, Mikhail Patrakeev, Ekaterina Tsipis, <i>CICECO, University of Aveiro, PORTUGAL</i>
15:00-15:15	215	Single crystals in the $\text{La}_2\text{O}_3\text{-P}_2\text{O}_5$ binary system: a new approach for enhanced proton conductivity <u>Juan Claudio Nino</u> , Satyajit Phadke, <i>University of Florida, USA</i>
15:15-15:30	319	Stability range of mixed ionic-electronic conducting $\text{Ba}_{0.5}\text{Sr}_{0.5}\text{Co}_{0.8}\text{Fe}_{0.2}\text{O}_{3-\delta}$ <u>Christian Niedrig</u> , Simon Taufall, Stefan Wagner, Ellen Ivers-Tiffée, <i>Karlsruhe Institute of Technology (KIT), GERMANY</i>
15:30-15:45	381	Superionic Conducting $\text{Na}_5\text{RSi}_4\text{O}_{12}$-type (R=Rare Earth) Glasses and Glass-Ceramics: Crystallization Kinetics and Conduction Properties <u>Toshinori Okura</u> , Hideki Monma, Kimihiro Yamashita, <i>Kogakuin University, JAPAN</i>

Session 8: Thin films II
Session Date: 14.06.2010
Session Time: 1330-1600
Room: Auditorium R9
Chair: Dietrich Hesse
Co-chair: Tomoya Ohno

Time	Abstract#	
13:30-14:00	26	Invited: Improvement of electrical characteristics of SrZrO₃-based resistive switching memory by doping and annealing process <u>Tseung-Yuen Tseng</u> , <i>National Chiao Tung University, TAIWAN</i>
14:00-14:15	135	Dielectric Nb₂O₅ and niobates: synthesis, material properties and consequences for electrical properties An Hardy, Sven Van Elshocht, Daan Dewulf, Nick Peys, Stefan De Gendt, Jules Mullens, <u>Marlies K. Van Bael</u> , <i>Hasselt University, BELGIUM</i>
14:15-14:30	78	Electrode-less microwave characterization of ultra-thin films on dielectric substrates <u>Viktor Bovtun</u> , Martin Kempa, Stanislav Kamba, Valery Pashkov, Vitaly Molchanov, <i>Institute of Physics ASCR, CZECH REPUBLIC</i>
14:30-14:45	143	ZnO layers by aqueous solution deposition: Morphology and its influence on hydrothermally grown ZnO nanorods <u>Linny Baeten</u> , Christopher De Dobbelaere, Jan D'Haen Heidi Van den Rul, Jules Mullens, <i>Hasselt University, BELGIUM</i>
14:45-15:00	279	Influence of Microstructure on Dielectric Properties of Solution-Derived CaCu₃Ti₄O₁₂ Thin Films <u>Barbara Malic</u> , Brigita Kuznik, Sebastjan Glinsek, Andreja Benčan, Marija Kosec, <i>Jozef Stefan Institute, SLOVENIA</i>
15:00-15:15	318	Influence of the pyrolysis process on the microstructure of pyrochlore La₂Zr₂O₇ films obtained by MOD <u>Eirini Sarigiannidou</u> , Virginie Roche, Carmen Jimenez, Laetitia Rapenne, Patrick Chaudouët, <i>LMGP, UMR 5628 CNRS, Grenoble-INP, Minatec, FRANCE</i>
15:15-15:30	90	Molecular auxetic properties and magnetostriction of epitaxial ferrite spinel thin films <u>Matjaz Valant</u> , Anna-Karin Axelsson, Frederic Aguesse, Neil M. Alford, <i>University of Nova Gorica, SLOVENIA</i>
15:30-15:45	467	Real time monitoring and control of internal stresses in functional thick films integrated with rigid substrates. <u>Mark Tillman</u> , Robert Dorey, <i>Cranfield University, UK</i>

Session 9: Basic science II

Session Date: 15.06.2010

Session Time: 0930-1220

Room: Auditorium R2

Chair: Barbara Malic

Co-chair: Juan C. Nino

Time	Abstract#	
09:30-10:00	194	Invited: Photochemical Solution Deposition: Possibilities of a New Processing Technology for the Thin Film Fabrication <u>Iñigo Bretos</u> , Ricardo Jiménez, M. Lourdes Calzada, <i>Instituto de Ciencia de Materiales de Madrid (ICMM-CSIC), SPAIN</i>
10:00-10:15	486	Oxygen surface exchange kinetics of SrTi_{1-x}Fe_xO_{3-δ} Chung-Yul Yoo, <u>Henny J.M. Bouwmeester</u> , <i>University of Twente, THE NETHERLANDS</i>
10:15-10:30	37	Atomic-Resolution High-Angle Dark-Field Scanning Transmission Electron Microscopy (HAADF-STEM) and Electron Energy Loss Spectroscopy (EELS) of Microwave Dielectrics <u>Feridoon Azough</u> , Robert Freer, Bernhard Schaffer, <i>University of Manchester, UK</i>
10:30-10:50		Coffee break
10:50-11:05	181	Transmission Electron Microscopy (TEM) investigations of Ba_{0.5}Sr_{0.5}Co_{0.8}Fe_{0.2}O_{3-δ} thin films fabricated by pulsed-laser deposition (PLD) Philipp Müller, <u>Heike Störmer</u> , Dagmar Gerthsen, Dirk Fuchs, <i>Karlsruhe Institute of Technology, GERMANY</i>
11:05-11:20	153	A novel method for measuring diffusional profiles in metal-ceramic composites <u>Denis Schuetz</u> , Christoph Kurta, Klaus Reichmann, <i>Graz University of Technology, AUSTRIA</i>
11:20-11:35	448	Diffusion behavior in thin films with wurtzite crystal structure <u>Hajime Haneda</u> , Naoki Ohashi, Isao Sakagushi, Yutaka Adachi, Takeshi, Ohgaki, <i>National Institute for Materials Science, JAPAN</i>
11:35-11:50	100	Thermal CVD of PZT by a novel single source PZT-Precursor <u>Michael Bender</u> , Michael Veith, Tobias Lehnert, Marcus Koch, Volker Huch, <i>Leibniz Institut fuer neue Materialien, GERMANY</i>
11:50-12:05	293	Pressure-Temperature Phase Diagram for a Tin Modified Lead Zirconate Titanate Ceramic <u>Robert Grubbs</u> , Pin Yang, Alexander Roesler, Roger Moore, Christopher DiAntonio, <i>Sandia National Laboratories, USA</i>
12:05-12:20	171	Use of Thermal Probe methods to characterise polarisation variability in electroceramics <u>Mark Stewart</u> , Markys Cain, <i>National Physical Laboratory, UK</i>

Session 10: Piezoelectric materials III

Session Date: 15.06.2010

Session Time: 0930-1220

Room: Auditorium R5

Chair: Dragan Damjanovic

Co-chair: Gunilla Wingqvist

Time	Abstract#	
09:30-10:00	347	Invited: In situ, time-resolved diffraction measurements reveal the true origin of the electric-field-induced strain in PZT piezoelectric ceramics: the intrinsic piezoelectric lattice response is negligible <u>Jacob Jones</u> , Abhijit Pramanick, Juan Nino, John Daniels, Dragan Damjanovic, <i>University of Florida, USA</i>
10:00-10:15	197	Focused high frequency lead-free transducers based on piezoelectric thick films <u>Karsten Hansen</u> , Konstantin Astafiev, Tomasz Zawada, <i>Ferroperm Piezoceramics A/S, DENMARK</i>
10:15-10:30	461	Is there a stoichiometric and single phase ceramic $K_{0.5}Bi_{0.5}TiO_3$? <u>Jakob König</u> , Tina Šetinc, Danilo Suvorov, <i>Jožef Stefan Institute, SLOVENIA</i>
10:30-10:50		Coffee break
10:50-11:05	177	$K_{0.5}Na_{0.5}Nb_3$ (KNN) based thick films <u>Marija Kosec</u> , Tadej Rojac, Janez Holc, Barbara maliè, <i>Jožef Stefan Institute, SLOVENIA</i>
11:05-11:20	465	Low temperature production of lead-free piezoelectric thick films <u>Tony Lusiola</u> , Nitin Chelwani, Francesca Bortolani, Qi Zhang, Robert Dorey, <i>Cranfield University, UK</i>
11:20-11:35	267	Piezoelectric Properties of Doped $BiFeO_3$-$BaTiO_3$ Ceramics <u>Chae Il Cheon</u> , Jeong Seog Kim, Sang Hwan Moon, A Young Kim, Seung Ho Han, <i>Hoseo University, SOUTH KOREA</i>
11:35-11:50	437	Structural and electrical properties of $Na_{0.5}K_{0.5}NbO_3$ ferroelectric thin films grown by RF magnetron sputtering <u>Lee-Seung Kang</u> , In-Tae Seo, Hwi-Yeol Park, Chan-Hee Nam, Byung-Hyun Choi, Sahn Nahm, <i>Korea University, SOUTH KOREA</i>
11:50-12:05	36	Study of $Li_xAg_{1-x}(Nb_{0.5}Ta_{0.5})O_3$ solid solutions <u>Hidayat Ullah Khan</u> , Ian Reaney, Iasmi Sterianou, <i>The University of Sheffield, UK</i>
12:05-12:20	232	Templated Grain Growth of Lead-Free Alkaline Niobate-based Piezoceramics <u>Thomas Soller</u> , Katrin Benkert, Carsten Schuh, A. Murat Avci, Ender Suvaci, <i>Siemens AG, GERMANY</i>

Session 11: Fuel cells I

Session Date: 15.06.2010

Session Time: 0930-1220

Room: Auditorium R8

Chair: Jennifer L.M. Rupp

Co-chair: Toshinori Okura

Time	Abstract#	
09:30-10:00	507	Invited: Micro-engineering of SOFC electrodes <u>John Irvine</u> , <i>University of St Andrews, UK</i>
10:00-10:15	145	Conductivity and microstructure of nanostructured $\text{La}_{1-x}\text{Sr}_x\text{Ga}_{1-y}\text{Mg}_y\text{O}_{3-\delta}$ ceramics processed by spark plasma sintering from mechanosynthesized phase <u>Alberto Moure</u> , Jesús Tartaj, Jean Galy Carlos Moure, Alicia Castro, <i>Instituto de Cerámica y Vidrio (CSIC), SPAIN</i>
10:15-10:30	209	Solid Oxide Fuel Cell Based on Proton-Conducting Ceramic Electrolyte <u>U. (Balu) Balachandran</u> , Tae Lee, Stephen Dorris, <i>Argonne National Laboratory, USA</i>
10:30-10:50		Coffee break
10:50-11:05	237	Co-precipitation synthesis of model SOFC materials Cinzia Cristiani, Giovanni Dotelli, <u>Renato Pelosato</u> , Riccardo Ruffo, Luca Zampori, <i>Politecnico di Milano, ITALY</i>
11:05-11:20	480	$(\text{La,Sr})(\text{Ti,Mn})\text{O}_{3-\delta}$ Perovskites as Dual Electrode Materials for Symmetrical Solid Oxide Steam Electrolysis Cells <u>Caroline Pirovano</u> , Sabine Roudeau, Messaoud Benamira, Richard Laucournet, Rose-Noëlle Vannier, <i>UCCS UMR CNRS 8181 USTL-ENSCL-ECL, FRANCE</i>
11:20-11:35	127	Fabrication and performance of micro-SOFCs supported on metal <u>Gyeong Man Choi</u> , Yoonki Lee, <i>POSTECH, SOUTH KOREA</i>
11:35-11:50	217	Intermediate Temperature Solid Oxide Fuel Cells Based on a Thin $\text{BaZr}_{1-x}\text{Y}_x\text{O}_{3-\delta}$ a Proton Conductor Electrolyte <u>Emiliana Fabbri</u> , Daniele Pergolesi, Enrico Traversa, <i>National Institute for Materials Science (NIMS), JAPAN</i>
11:50-12:05	67	Low-temperature micro-solid oxide fuel cells with a free-standing ultrathin yttria-stabilized-zirconia foil electrolyte <u>Anna Evans</u> , Lorenz Bonderer, Philipp Chen Anja, Bieberle-Hütter Jennifer Rupp, <i>ETH Zurich, SWITZERLAND</i>
12:05-12:20	252	Hydrogen transport membranes for pre-combustion gas separation <u>Yngve Larring</u> , Marie-Laure Fontaine, Paul Inge Dahl, Partow Pakdel Henriksen, Rune Bredesen, <i>SINTEF Materials and Chemistry, NORWAY</i>

Session 12: Interfaces and Modelling

Session Date: 15.06.2010

Session Time: 0930-1220

Room: Auditorium R9

Chair: Horst Beige

Co-chair: Markys Cain

Time	Abstract#	
09:30-10:00	365	Invited: Functional Interaces in Complex Oxides <u>Guus Rijnders</u> , <i>MESA+ Institute of Nanotechnology, University of Twente, THE NETHERLANDS</i>
10:00-10:15	354	Effect of Pr-additions to the grain boundary conductivity in acceptor-doped BaZrO₃ <u>Anna Magrasó</u> , Kristine B. Kostøl, Christian Kjølseth, Reidar Haugsrud, Truls Norby, <i>University of Oslo, NORWAY</i>
10:15-10:30	392	Advanced Control of the Reduction in BaTiO₃ Ceramics <u>U-Chan Chung</u> , Catherine Elissalde, Claude Estournés, Alla, Artemenko, Stéphane Mornet, <i>ICMCB-CNRS, FRANCE</i>
10:30-10:50		Coffee break
10:50-11:05	45	BaTiO_{3-δ}: An example of ferroelectric metal? <u>Taras Kolodiaznyi</u> , <i>National Institute for Materials Science, JAPAN</i>
11:05-11:20	138	Energy band alignment between Pb(Zr,Ti)O₃ and high and low work function conducting oxides - from hole to electron injection <u>Robert Schafrank</u> , Feng Chen, Shunyi Li, Wembin Wu, Andreas Klein, <i>Darmstadt University of Technology, GERMANY</i>
11:20-11:35	139	In situ high pressure synchrotron photoemission study of the SrTiO₃/Pt interface <u>Robert Schafrank</u> , Christoph Körber, Andre Wachau, Andreas Klein, Michael Hävecker, <i>Darmstadt University of Technology, GERMANY</i>
11:35-11:50	101	Interface Effects on the Electrical Conductivity of Cerium Oxide Thin Films <u>Marcus C. Göbel</u> , Giuliano Gregori, Xiangxin Guo, Bernhard Fenk, Joachim Maier, <i>Max-Planck-Institut für Festkörperforschung, GERMANY</i>
11:50-12:05	361	Thermodynamic and structural properties of lead-free ferroelectric materials: First-principles calculations on Bi_{0.5}Na_{0.5}TiO₃ and (Bi_{0.5}Na_{0.5}TiO₃)_{0.94}-(BaTiO₃)_{0.06} <u>Silke Hayn</u> , Melanie Gröting, Karsten Albe, <i>Technische Universität Darmstadt, GERMANY</i>
12:05-12:20	80	Monte Carlo Simulation of Aggregation of Reagent Particles in the Suspensions for Pb(Mg_{1/3}Nb_{2/3})O₃ Synthesis <u>Gregor Trefalt</u> , Bosiljka Tadić, Marija Kosec, <i>Jožef Stefan Institute, SLOVENIA</i>

Session 13: Magnetic, semiconducting and superconducting materials

Session Date: 15.06.2010

Session Time: 1330-1500

Room: Auditorium R2

Chair: Alicia Castro

Co-chair:

Time	Abstract#	
13:30-13:45	137	The Néel magnetic anisotropy model applied to $\text{La}_{0.67}\text{Sr}_{0.33}\text{MnO}_3$ thin films <u>Hans Boschker</u> , Evert Houwman, Guus Rijnders, Dave Blank, <i>MESA+ Institute of Nanotechnology, University of Twente, THE NETHERLANDS</i>
13:45-14:00	180	Structural and Magnetic Properties of $\text{Ho}(\text{Co},\text{Ni})_x\text{Mn}_{1-x}\text{O}_3$ Ceramic Samples <u>Paulo Lisboa-Filho</u> , Cassio Morilla-Santos, <i>UNESP - Univ Estadual Paulista, BRAZIL</i>
14:00-14:15	52	Magnetic properties of Mn-doped incipient ferroelectrics <u>Anna-Karin Axelsson</u> , Matjaz Valant, Taras Kolodiazhnyi, Santosh Gunda Babu, Neil Alford, <i>Imperial College London, UK</i>
14:15-14:30	248	Phase stability, point defects and magneto-resistance of non-stoichiometric $\text{Sr}_2\text{FeMoO}_{3-\delta}$ <u>Jörg Töpfer</u> , Robert Kircheisen, <i>Univ. Appl. Sciences Jena, GERMANY</i>
14:30-14:45	296	Preparation and properties of Mn-highly doped SrTiO_3 nanoparticles <u>Marina Makarova</u> , Alexandr Dejneka, Lubomir Jastrabik, Olexandr Stupakov, Andrei Badalyan, <i>Institute of physics, CZECH REPUBLIC</i>
14:45-15:00	121	Sol-gel synthesis and electrical properties of solid solutions $\text{La}_{1-x}\text{A}_x\text{MnO}_3$ (A - Sr, Ba) <u>Oleg V'yunov</u> , Sergey Solopan, Anatolii Belous, Aleksandr Tovstolytkin, <i>V.I.Vernadskii Institute of General & Inorganic Chemistry UKRAINE</i>

Session 14: Fuel cells II
Session Date: 15.06.2010
Session Time: 1330-1530
Room: Auditorium R8
Chair: John Irvine
Co-chair: U. (Balu) Balachandran

Time	Abstract#	
13:30-13:45	332	A study on the energy harvesting applications of flextensional transducer arrays <u>Emre Tufekcioglu</u> , Aydin Dogan, Pascal Mosbah, Anne-Christine Hladky, <i>Anadolu University, TURKEY</i>
13:45-14:00	257	Novel cobalt-free oxygen-permeable perovskite-type membranes <u>Konstantin Efimov</u> , Armin Feldhoff, <i>Leibniz Universität, GERMANY</i>
14:00-14:15	284	Force amplified piezoelectric energy harvester with external leverage <u>Mikko Leinonen</u> , Jaakko Palosaari, Jari Juuti, Heli Jantunen, <i>University of Oulu, FINLAND</i>
14:15-14:30	157	Structural - transport properties relationships on Ce_{1-x}Ln_xO₂ system and effect of cobalt addition <u>Jose M. Serra</u> , Cecilia Solis, Maria Balaguer, <i>de Tecnologi-a Quimica (UPV-CSIC), SPAIN</i>
14:30-14:45	408	Perovskite Resistive Switching for Non-Volatile Memories <u>Jennifer L.M. Rupp</u> , Thomas Ryll, Julia Martynczuk, Davide Granata, Felix Messerschmitt, <i>ETH Zürich, SWITZERLAND</i>
14:45-15:00	253	The role of adhesives in piezoelectric energy harvesters <u>Mark Stewart</u> , Paul Weaver, Markys Cain, <i>National Physical Laboratory, UK</i>
15:00-15:15	377	Novel Cobalt Oxide-based Water Electrolysis Catalyst: Deposition Kinetics and Catalytic Efficiency <u>Johanna Engel</u> , Harry Tuller, <i>Massachusetts Institute of Technology, USA</i>
15:15-15:30	353	Electrochemical performance and modelling of Ni-LaNbO₄ cermet anodes for proton conducting SOFCs <u>Anna Magrasó</u> , Marie-Laure Fontaine, Ann Mari Svensson, Yngve Larring, Reidar Haugrud, <i>University of Oslo, NORWAY</i>

Session 15: Varistors and Thermistors

Session Date: 15.06.2010

Session Time: 1330-1500

Room: Auditorium R9

Chair: Mamoru Senna

Co-chair: José de los Santos Guerra

Time	Abstract#	
13:30-13:45	340	Comparison of dielectric properties of ceramic NiMn₂O₄ NTC thermistors produced from different precursors <u>Rainer Schmidt</u> , Alejandra Díez, Aurora Sagua, Marisa Frechero, Emilio Matesanz, <i>Universidad Complutense de Madrid, SPAIN</i>
13:45-14:00	195	A modified Kröger-Vink Diagram for fine grained La-doped BaTiO₃ PTCR-ceramics <u>Hayato Katsu</u> , Christian Pithan, Detlev Hennings, Rainer Waser, Hiroshi Takagi, <i>Murata Manufacturing Co, Ltd, JAPAN</i>
14:00-14:15	362	Growth and characterization of CaCu₃Ti₄O₁₂ films deposited on Si/SiO₂/Ti/Pt substrates by RF magnetron sputtering <u>José Arana Varela</u> , Ednan Joanni, Raluca Savu, Ronald, Tararam, Paulo Bueno, Elson Longo, <i>São Paulo State University, BRAZIL</i>
14:15-14:30	128	Low-voltage ZnO-based varistor ceramics doped with Sb₂O₃ <u>Slavko Bernik</u> , Mojca Presečnik, Matejka Podlogar, <i>Jožef Stefan Institute, SLOVENIA</i>
14:30-14:45	287	Microstructure-Property Relationship in Textured ZnO-Based Varistors <u>Ismail Ozgur Ozer</u> , Ender Suvaci, Slavko Bernik, <i>Anadolu University, TURKEY</i>
14:45-15:00	471	Reoxidation of high Negative Temperature Coefficient (NTC)ceramics sintered under reducing atmosphere David Houivet, <u>Alexis Ngueteu Kamlo</u> , Jerome Bernard, Celine Lelievre, <i>University of Caen Basse Normandie, FRANCE</i>
15:00-15:15	58	Microwave sintering of ZnO-based varistors <u>Etienne Savary</u> , Sylvain Marinel, Alain Pautrat <i>CRISMAT Laboratory, FRANCE</i>

Session 16: Dielectric materials I**Session Date: 16.06.2010****Session Time: 0930-1220****Room: Auditorium R2****Chair: Hitoshi Ohsato****Co-chair:**

Time	Abstract#	
09:30-10:00	256	Invited: Determination of the permittivity of the multi-component ($n \geq 2$) coarse grained samples <u>Ivan Rychetsky</u> , Antonin Klic, <i>Institute of Physics, Academy of Sciences of the Czech Republic, CZECH REPUBLIC</i>
10:00-10:15	72	(Ba,Sr)TiO₃ tunable capacitors with Al₂O₃ barrier layer <u>Shunyi Li</u> , Yuliang Zheng, Andre Wachau, Robert Schafranek, Rolf Jakoby, <i>Technische Universitaet Darmstadt, GERMANY</i>
10:15-10:30	388	Compositional Effects on Electrical and Thermodynamic Properties Perovskite Structured Solid-Solution Oxides <u>Soonil Lee</u> , Roni Levi, Weiguo Qu, Sung Chan Lee, Clive Randall, <i>Penn State University, USA</i>
10:30-10:50		Coffee break
10:50-11:05	164	Conduction mechanism of SiOC dielectric thin films for nanometer device technology <u>Tai-Fa Young</u> , Ting-Chang Chang, Ya-Lian Yang, <i>National Sun Yat-sen University, TAIWAN</i>
11:05-11:20	487	Constrained sintering and dielectric properties of BaLa₄Ti₄O₁₅ EPD thick films on Pt-foil substrates <u>Luis Amaral</u> , Paulo Vilarinho, Ana Senos, Christine Jamin, Oliver Guillon, <i>University of Aveiro, PORTUGAL</i>
11:20-11:35	182	Crystal Structure and Microwave Dielectric Property Relations in Ba(Mg_(1-x/3)Co_{x/3}Nb_{2/3})O₃ Ceramics Yong-Ming Lin, Tien-Chieh Wu, Ching-Tien Chen, Chun-Te Lee, <u>Chi-Yuen Huang</u> , <i>National Cheng Kung University, TAIWAN</i>
11:35-11:50	205	Development of High-Dielectric-Constant Capacitors for Power Inverters in Hybrid Electric Vehicles <u>U. (Balu) Balachandran</u> , Manoj Narayanan, Beihai Ma, <i>Argonne National Laboratory, USA</i>
11:50-12:05	405	Dielectric properties of sol-gel-derived Bi₁₂SiO₂₀ thin films <u>Danilo Suvorov</u> , Asja Veber, Spela Kunej, <i>Jožef Stefan Institute, SLOVENIA</i>
12:05-12:20	424	Effects of sintering temperature on the internal barrier layer capacitor (IBLC) structure in CaCu₃Ti₄O₁₂ ceramics <u>Rainer Schmidt</u> , Derek Sinclair, <i>Universidad Complutense de Madrid, SPAIN</i>

Session 17: Ferroelectric materials I

Session Date: 16.06.2010

Session Time: 0930-1220

Room: Auditorium R5

Chair: Vincenzo Buscaglia

Co-chair: Ian MacLaren

Time	Abstract#	
09:30-10:00	193	Invited: Probing the defect chemistry of Barium Titanate using rare earth dopants and Impedance Spectroscopy <u>Derek Sinclair</u> , <i>University of Sheffield, UK</i>
10:00-10:15	411	Annealing effect on the domain orientation in PbTiO₃ nanorods <u>Per Martin Rørvik</u> , Ragnhild Sæterli, Chang Chuan You, Randi Holmestad, Thomas Tybell, Tor Grande, Mari-Ann Einarsrud, <i>Norwegian University of Science and Technology, NORWAY</i>
10:15-10:30	170	Barrier heights, polarization switching and electrical fatigue in PZT ceramics with different electrodes <u>Feng Chen</u> , Robert Schafrank, Sergey Zhukov, Julia Glaum, Torsten Granzow, <i>Technische Universität Darmstadt, GERMANY</i>
10:30-10:50		Coffee break
10:50-11:05	292	Effect of dc Bias and Hydrostatic Pressure on the Ferroelectric-Antiferroelectric Phase Transformation in a Tin Modified Lead Zirconate Titanate Ceramic <u>Pin Yang</u> , Robert Grubbs, Alexander Roesler, Roger Moore, Christopher DiAntonio, <i>Sandia National Laboratories, USA</i>
11:05-11:20	60	Improved performance of tunable Ba_xSr_{1-x}TiO₃ TFBARs <u>Andrei Vorobiev</u> , Spartak Gevorgian, <i>Chalmers University of Technology, SWEDEN</i>
11:20-11:35	481	Structure and Electromechanical Properties of (Bi_{0.5}Na_{0.5})_{1-x}Ba_xTiO₃ (BNBT) Ceramics <u>Gunnar Picht</u> , Hans Kungl, Michael J. Hoffmann, <i>Karlsruhe Institute of Technology, GERMANY</i>
11:35-11:50	29	Low Field, Voltage-dependent Bulk Resistance Phenomena in BaTiO₃-based Electroceramics <u>Hector Beltran</u> , Marta Prades, Nahum Masó, Eloisa Cordoncillo, Anthony R. West, <i>Universidad Jaume I, SPAIN</i>
11:50-12:05	95	Phase transformations of PZT in the morphotropic region analysed by temperature-dependent Raman spectroscopy <u>Marco Deluca</u> , Hideo Fukumura, Carmen Galassi, Hiroshi Harima, <i>Materials Center Leoben Forschung GmbH, AUSTRIA</i>

Session 18: Ceramic processing I

Session Date: 16.06.2010

Session Time: 0930-1220

Room: Auditorium R8

Chair:

Co-chair:

Time	Abstract#	
09:30-10:00	281	Invited: Manufacturing and properties of dense gas separation membranes <u>Marie-Laure Fontaine</u> , Paul Inge Dahl, Yngve Larring, Thijs Peters, Rune Bredesen, <i>SINTEF, NORWAY</i>
10:00-10:15	123	Characterizations of a High Temperature Co-Fired Thick Film Resistors <u>Chi-Hsiung Hsi</u> , Fang-Chi Hsu, C. Chou, Y Yang, Albert Wu, <i>National United University, TAIWAN</i>
10:15-10:30	286	Three Dimensional Imaging of Ferroelectric Heterostructures Sintered by Spark Plasma Sintering <u>Catherine Elissalde</u> , Dominique Bernard, Claude Estournés, U-Chan Chung, Romain Costes, <i>ICMCB-CNRS, FRANCE</i>
10:30-10:50		Coffee break
10:50-11:05	204	The effects of binder properties on the synthesis of single and hollow ferroelectric fibres by co-extrusion <u>Frank Clemens</u> , Marina Rojas-Ismael, Thomas Graule, Michael Hoffmann, <i>Swiss Federal Laboratories for Materials Testing and Research, SWITZERLAND</i>
11:05-11:20	406	Development of anisotropy during tape casting <u>Armin Dellert</u> , Andreas Heunisch, Andreas Roosen, <i>University of Erlangen-Nuremberg, GERMANY</i>
11:20-11:35	19	The effect of PbO based glass and Cu₂O sintering aids on the densification behavior and electrical properties of PZT <u>Amanda Young</u> , Roger Moore, Alex Roesler, Mike Hutchinson, Margaret Sanchez, <i>Sandia National Laboratory, USA</i>
11:35-11:50	93	Electrically-driven assembly of ZnO films with tailored orientation Maria Verde, <u>Marco Peiteado</u> , Begona Ferrari, Marina Villegas, Amador Caballero, <i>Instituto de Cerámica y Vidrio, CSIC, SPAIN</i>
11:50-12:05	477	Optical study of La₂NiO_{4+δ} porous layers on YSZ for SOFC applications (300 < T <1300 K) <u>Minh-Tri Ta</u> , Benoit Rousseau, Domingos De Sousa Meneses, Patrick Echegut, Mathilde Rieu, <i>CEMHTI CNRS - UPR3079, FRANCE</i>
12:05-12:20	51	Study of the sintering process and microstructure evolution in sodium niobate <u>Jurij Koruza</u> , Barbara Malić, Maria Kosec, <i>Josef Stefan Institute, SLOVENIA</i>

Session 19: Multiferroic Materials I

Session Date: 16.06.2010

Session Time: 0930-1150

Room: Auditorium R9

Chair: Xiang Ming Chen

Co-chair: Wataru Sakamoto

Time	Abstract#	
09:30-10:00	68	Invited: Electric-field control of magnetic properties in multiferroic magnetoelectric composites <u>Ce Wen Nan</u> , <i>Tsinghua University, CHINA</i>
10:00-10:15	168	Approach to multiferroic effect with BaTiO₃ – NiFe₂O₃ core-shell structure Osami Yanagisawa, <u>Christelle Harnois</u> , Sylvain Marinell, Richard Retoux, <i>Laboratoire CRISMAT, FRANCE</i>
10:15-10:30	482	Crystal structure and phase diagram of oxygen hyperstoichiometric BiFe_{1-x}Mn_xO_{3-δ} <u>Sverre Magnus Selbach</u> , Thomas Tybell, Mari-Ann Einarsrud, Tor Grande, <i>Norwegian University of Science and Technology, NORWAY</i>
10:30-10:50		Coffee break
10:50-11:05	291	Dielectric and magnetic properties of novel multiferroic Eu_{0.5}Ba_{0.5}TiO₃ ceramics S Kamba, V Goian, P Vanek, M Savinov, <u>D Nuzhnyy</u> , <i>Institute of Physics ASCR, CZECH REPUBLIC</i>
11:05-11:20	114	Microstructure-related functional properties in multiferroic composites with core-shell structure <u>Lavinia-Petronela Curecheriu</u> , Maria Teresa Buscaglia, Vincenzo Buscaglia, Petronel Postolache, Adelina Ianculescu, <i>University Alexandru Ioan Cuza, ROMANIA</i>

Session 20: Dielectric Materials II

Session Date: 16.06.2010

Session Time: 1330-1530

Room: Auditorium R2

Chair: Ivan Rychetsky

Co-chair: Danilo Suvorov

Time	Abstract#	
13:30-13:45	75	Hydrophobic Porous Organosilica Thin Films for Application as Low-k Material <u>Frederik Goethals</u> , <i>Ghent University, BELGIUM</i>
13:45-14:00	196	Impedance spectroscopy of Ni- and Cu-containing BaTiO₃-based composites for energy storage <u>Christian Pithan</u> , <u>Songhak Yoon</u> , <u>Shoichi Iwaya</u> , <i>Forschungszentrum Jülich GmbH, GERMANY</i>
14:00-14:15	155	Influence of composition and extrinsic electrical conduction on the microwave dielectric loss of BaCo_{1/3}Nb_{2/3}O₃ ceramics <u>Ming Li</u> , <u>Antonio Feteira</u> , <u>Mehdi Mirsaneh</u> , <u>Soonil Lee</u> , <u>Michael T. Lanagan</u> , <u>Clive A. Randall</u> , <u>Derek C. Sinclair</u> , <i>University of Sheffield, UK</i>
14:15-14:30	86	Microstructure Development of (Ba_{1-x}TiO₃)_{0.912} - (Bi_{0.5}Na_{0.5}TiO₃)_{0.088} PTC Ceramics <u>Yasushi Kaneko</u> , <u>Toshiki Kida</u> , <u>Kentaro Ino</u> , <u>Takeshi Shimada</u> , <u>Feridoon Azough</u> , <i>Hitachi Metals Ltd., JAPAN</i>
14:30-14:45	54	Microwave Dielectric Properties of B-site Ordered Perovskite BaBi_{1.4}Nb_{0.6}O_{6-y} and (x)Ba₂Bi_{1.4}Nb_{0.6}O_{6-y}-(1-x)SrTiO₃ <u>Chau C. Tan</u> , <u>Derek Sinclair</u> , <u>Ian Reaney</u> , <i>University of Sheffield, UK</i>
14:45-15:00	452	Millimeterwave dielectrics with low dielectric constant <u>Hitoshi Ohsato</u> , <u>A-Yong Kim</u> , <u>C-I. Cheon</u> , <u>K-W. Chae</u> , <u>J-S Kim</u> , <i>Hoseo University, SOUTH KOREA</i>
15:00-15:15	63	Non-stoichiometry in the perovskite niobates Ba(M_{1/3}²⁺Nb_{2/3})O₃ (M - Co, Zn, Mg) <u>Oleg Ovchar</u> , <u>Dmitrii Durylin</u> , <u>Dmitrii Mishchuk</u> , <u>Anatolii Belous</u> , <u>Danilo Suvorov</u> , <i>V.I.Vernadskii Institute of General and Inorganic Chemistry NAS of Ukraine, UKRAINE</i>
15:15-15:30	149	The Properties and High Resolution Structural Analysis of Ca_(1-x)Nd_{2x/3}TiO₃ Microwave Dielectric Ceramics <u>Robert Lowndes</u> , <u>Feridoon Azough</u> , <u>Robert Freer</u> , <i>University of Manchester, UK</i>

Session 21: Ferroelectric Materials II

Session Date: 16.06.2010

Session Time: 1330-1530

Room: Auditorium R5

Chair: Derek Sinclair

Co-chair: Pin Yang

Time	Abstract#	
13:30-13:45	414	Fabrication of Metal-Ferroelectric-Insulator-Semiconductor Field Effect Transistors (MFIS-FETs) Using the Poly(vinylidene fluoride-trifluoroethylene) (P(VDF-TrFE)) <u>Byung-Eun Park</u> , <u>Gwang-Geun Lee</u> , <i>University of Seoul, SOUTH KOREA</i>
13:45-14:00	387	Thermoelectric Properties of Ferroelectric Oxides <u>Soonil Lee</u> , Rudeger Wilke, Takashi Teranishi, Susan Trolier-McKinstry, Clive Randall, <i>Penn State University, USA</i>
14:00-14:15	328	Ferroelectric phase transitions in tetragonal tungsten bronze $\text{Pb}_{2(1-x)}\text{K}_{1+x}\text{Gd}_x\text{Nb}_5\text{O}_{15}$ <u>Yassine Amira</u> , Yaovi Gagou, Daoud Mezzane, Abdelawahid Zegzouti, Mohamed Elaattmani, <i>Université de Picardie Jules Verne, FRANCE</i>
14:15-14:30	336	Ferroelectricity in Layer-structured Nanoceramics Fabricated by Spark Plasma Sintering <u>Haixue Yan</u> , <i>Queen Mary University of London, UK</i>
14:30-14:45	393	Mapping the local polarization in incommensurate antiferroelectrics <u>Ian MacLaren</u> , Rafael Villaurrutia, Bernhard Schaffer, Aimé Peláiz-Barranco, <i>University of Glasgow, UK</i>
14:45-15:00	166	Synthesis of $\text{Bi}_4\text{Ti}_3\text{O}_{12}$ nanostructures <u>Vincenzo Buscaglia</u> , Maria Teresa Buscaglia, Vishwanath Kalyani, Paolo Nanni, <i>National Research Council, ITALY</i>
15:00-15:15	334	Thermal Depoling of High Temperature Ferroelectric Ceramics <u>Tao Zeng</u> , <i>Queen Mary University of London, UK</i>

Session 22: Ceramic processing II

Session Date: 16.06.2010

Session Time: 1330-1515

Room: Auditorium R8

Chair: Amanda Young

Co-chair: Catherine Elissalde

Time	Abstract#	
13:30-13:45		
13:45-14:00	167	Optimization of lead zirconate titanate $\text{Pb}(\text{Zr}_{0.52}\text{Ti}_{0.48})\text{O}_3$ powder synthesis for the manufacturing of composite sol-gel thick films <u>Jérémy Balencie</u> , Philippe Boy, Luc Bianchi, Franck Levassort, <i>CEA, DAM, Le Ripault, FRANCE</i>
14:00-14:15	103	Optimization of starting mixture for solid state synthesis of phase pure and fine grained KNbO_3 <u>Mamoru Senna</u> , Tamiko Kinoshita, Yutaka Doshida, Hiroshi Kishi, <i>Keio University, JAPAN</i>
14:15-14:30	425	Synthesis of gadolinium doped ceria by polymerization with citric acid <u>Jairo Alberto Gómez Cuaspué</u> , Jesús Sigifredo, Valencia Ríos, Juan Bautista, Carda Castelló, <i>Universidad Nacional de Colombia, COLOMBIA</i>
14:30-14:45	407	Tape casting of ITO green tapes for the application in flexible electroluminescence lamps <u>Nadja Straue</u> , Martin Rauscher, Martina Dressler, Andreas Roosen, <i>University of Erlangen-Nuremberg, GERMANY</i>

Session 23: Multiferroic Materials II

Session Date: 16.06.2010

Session Time: 1330-1530

Room: Auditorium R9

Chair: Ce Wen Nan

Co-chair: Anna-Karin Axelsson

Time	Abstract#	
13:30-14:00	23	Invited: Ferromagnetic and Relaxor-Like Dielectric Behaviors in Ba(Fe_{1/2}Nb_{1/2})O₃ Complex Perovskite Ceramics and Thin Films <u>Xiang Ming Chen</u> , Wei Zhang Zhuo Wang, <i>Zhejiang University, CHINA</i>
14:00-14:15	98	Synthesis, structure and phase transitions in complex oxides A₃TeO₆ (A=Mn, Co, Ni) <u>Ekaterina Politova</u> , Sergey Ivanov, Natalia Golubko, Galina Kaleva, Alexander Mosunov, <i>Karpov Institute of Physical Chemistry, RUSSIA</i>
14:15-14:30	56	Synthesis, processing and electrical characterization of the multiferroic xBiFeO₃ - (1-x)PbTiO₃ system Covadonga Correias, Teresa Hungria, Miguel Alguero, Jean Galy, <u>Alicia Castro</u> , <i>Instituto de Ciencia de Materiales de Madrid, CSIC, SPAIN</i>
14:30-14:45	44	Synthesis and Properties of Multiferroic BiFeO₃-BaTiO₃ Thin Films by Chemical Solution Deposition <u>Wataru Sakamoto</u> , Yuya Ito, Makoto Moriya, Toshinobu Yogo, <i>Nagoya University, JAPAN</i>
14:45-15:00	152	Strong ferroelectric domain-wall pinning in BiFeO₃ ceramics <u>Tadej Rojac</u> , Marija Kosec, Bojan Budic, Nava Setter, Dragan Damjanovic, <i>Jožef Stefan Institute, SLOVENIA</i>
15:00-15:15		
15:15-15:30	71	Neutron Diffraction Studies of Cation, Spin and Dipole Order in New Multiferroic Perovskites <u>Sergey Ivanov</u> , Per Nordblad, Roland Tellgren, Roland Mathieu, Clemens Ritter, <i>Karpov Institute of Physical Chemistry, RUSSIA</i>