

8:00	<b>Opening and Welcome</b>
8:15	<b>POLAR OXIDES IN THE WORLD OF NANO-ELECTRONICS (PLENARY TALK)</b> R. Waser FZJ Research Center Jülich and RWTH Aachen University, Germany
	<i>Integrated Dielectrics and Ferroelectrics</i> <i>Session Chairs: N. Ichinose</i> <i>N. Mizutani</i>
9:00	<b>NANOSCALE PHENOMENA IN SYNTHETIC FUNCTIONAL OXIDE HETEROSTRUCTURES : ROLE OF INTERFACES</b> R. Ramesh Dept. of Materials Science and Engineering and Center for Superconductivity Research, Dept. of Physics, Materials Research Science and Engineering Center, University of Maryland, College Park, MD 20742, USA
9:30	<b>INTEGRATED OXIDE-BASED HETEROSTRUCTURES ON SILICON</b> R. Droopad*, Z. Yu, J. Curless, M. Hu, K. Moore, D. Marshall Motorola Labs, Physical Sciences Research Laboratories, 7700 S. River Parkway, Tempe, AZ 85226, USA
10:00	<b>ADVANCED MICROWAVE INTEGRATED CIRCUITS WITH CERAMIC THIN-FILM CIRCUITRY</b> M. Fujimoto*, K. Ota, F. Iizuka, M. Satomi, K. Nakajima and T. Ogino Advanced Materials and Device, Japan Laboratory, Wireless Information Network Group, Taiyo Yuden Co., Ltd., 5607-2 Nakamuroda, Haruna-machi, Gunma 370-3347, Japan
10:30- 11:00	<b>Break</b>
	<i>Integrated Dielectrics and Ferroelectrics - continued</i> <i>Session Chairs: M. Fujimoto</i> <i>R. Ramesh</i>
11:00	<b>INTEGRATED MOCVD PZT THIN FILMS FOR 64MB FERAM ARRAYS</b> S. Aggarwal*, <sup>1</sup> A. Thomas <sup>1</sup> , J.S. Martin <sup>1</sup> , F. Celii <sup>1</sup> , L. Hall <sup>1</sup> , J. Rodriguez <sup>1</sup> , K.R. Udayakumar <sup>1</sup> , S.R. Summerfelt <sup>1</sup> , T.S. Moise <sup>1</sup> , and K.J. Taylor <sup>1</sup> , F. Chu <sup>2</sup> , S. Sun <sup>2</sup> , G. Fox <sup>2</sup> , R. Bailey <sup>2</sup> and T. Davenport <sup>2</sup> <sup>1</sup> Texas Instruments Inc., 13560 N. Central Expressway, MS 3736, Dallas, TX 75243, USA <sup>2</sup> Ramtron International Corporation, 1850 Ramtron Drive, Colorado Springs, CO 80921, USA
11:30	<b>MEDIATED PATTERNING OF ELECTROCERAMIC THIN FILMS</b> E.A. Mikalsen*, <sup>1</sup> and D.A. Payne <sup>2</sup> <sup>1</sup> Materials Science and Engineering Dept., University of Illinois at Urbana-Champaign, Urbana, IL 61801, USA <sup>2</sup> F. Seitz Materials Research Laboratory, University of Illinois at Urbana-Champaign, Urbana, IL 61801, USA
11:50	<b>EPITAXIAL GROWTH BEHAVIOR AND DIELECTRIC PROPERTIES OF SrTiO<sub>3</sub> FILMS ON BUFFERED Si(001) USING THE FIRST ATOMIC LAYER CONTROL</b> T. Yamada*, N. Wakiya, K. Shinozaki and N. Mizutani Dept. of Metallurgy and Ceramics Science, Graduate School of Science and Engineering, Tokyo Institute of Technology, 2-12-1, O-okayama, Meguro-ku, Tokyo 152-8552, Japan
12:10- 13:50	<b>Lunch</b>

	<i>Integrated Dielectrics and Ferroelectrics - continued</i> <i>Session Chair: W.J. Lee</i>
<b>13:50</b>	<b>PERSPECTIVES IN CERAMICS INTEGRATION</b> S. Kimura <sup>1</sup> and N. Ichinose* <sup>2</sup> <sup>1</sup> The Society of Non-Traditional Technology of Japan, 1-2-10-7F Toranomom, Minato-ku, Tokyo 105-0001, JAPAN <sup>2</sup> Dept. of Science and Technology, Waseda University, 3-4-1 Okubo Shinjuku-ku, Shinjuku-ku, Tokyo 169-8555, JAPAN
<b>14:20</b>	<b>EPITAXIAL ENGINEERING OF DIELECTRICS AND FERROELECTRICS</b> D.G. Schlom* <sup>1</sup> , J.H. Haeni <sup>1</sup> , W. Tian <sup>2</sup> , J. Schubert <sup>3</sup> , P. Irvin <sup>4</sup> , W. Chang <sup>5</sup> , M.D. Biegalski <sup>1</sup> , J.B. Neaton <sup>6</sup> , C. Fennie <sup>6</sup> , K.J. Choi <sup>7</sup> , Y.L. Li <sup>1</sup> , S. Choudhury <sup>1</sup> , L.Q. Chen <sup>1</sup> , C.B. Eom <sup>7</sup> , K.M. Rabe <sup>6</sup> , S. Trolier-McKinstry <sup>1</sup> , S.W. Kirchoefer <sup>5</sup> , J. Levy <sup>4</sup> , X.Q. Pan <sup>2</sup> , and M.E. Hawley <sup>8</sup> <sup>1</sup> Dept. of Materials Science and Engineering, Penn State University, University Park, PA 16802-5005, USA <sup>2</sup> Dept. of Materials Science and Engineering, The University of Michigan, Ann Arbor, MI 48109-2136, USA <sup>3</sup> Institut für Schichten und Grenzflächen ISG1-IT, Forschungszentrum Jülich GmbH, D-52425 Jülich, Germany <sup>4</sup> Dept. of Physics and Astronomy, University of Pittsburgh, Pittsburgh, PA 15260, USA <sup>5</sup> Naval Research Laboratory, Washington, DC 20375, USA <sup>6</sup> Dept. of Physics and Astronomy, Rutgers University, Piscataway, NJ 08854-8019, USA <sup>7</sup> Dept. of Materials Science and Engineering, University of Wisconsin-Madison, Madison, WI 53706, USA <sup>8</sup> Materials Science and Technology Division, Los Alamos National Laboratory, Los Alamos, NM 87545, USA
<b>14:50</b>	<b>RECENT DEVELOPMENTS ON MOCVD OF FERROELECTRIC THIN FILMS</b> T. Shiosaki*, Y. Otani and S. Okamura Graduate School of Materials Science, Nara Institute of Science and Technology (NAIST), 8916-5 Takayama-cho, Ikoma, Nara 630-0192, Japan
<b>15:20</b>	<b>TOWARDS THE LIMITS OF CHEMICAL SOLUTION DEPOSITED NANOSIZED FERROELECTRIC GRAINS</b> T. Schneller* <sup>1</sup> , A. Roelofs <sup>1</sup> and R. Waser <sup>1,2</sup> <sup>1</sup> Institut für Werkstoffe der Elektrotechnik II, RWTH Aachen, D-52074 Aachen, Germany <sup>2</sup> Institut für Festkörperforschung, Forschungszentrum Jülich, D-52425 Jülich, Germany
<b>15:40</b>	<b>SUBSTRATE SURFACE ENGINEERING FOR TAILORING PROPERTIES OF FUNCTIONAL CERAMICS</b> H.-U. Habermeier Max-Planck-Institut für Festkörperforschung, Heisenbergstr.1, D 70569 Stuttgart, Germany
	<i>Combinatorial Nanotechnology</i> <i>Session Chair: D. Schlom</i>
<b>16:00</b>	<b>COMBINATORIAL NANOTECHNOLOGY FOR INNOVATING ELECTROCERAMICS RESEARCH</b> H. Koinuma Materials and Structures Laboratory, Tokyo Institute of Technology, 4259 Nagatsuta, Midori-ku, Yokohama 226, Japan

<b>8:00</b>	<b>A MATERIALS ROADMAP FOR MICROPHOTONICS (PLENARY TALK)</b> L.C. Kimerling Dept. of Materials Science and Engineering and Materials Processing Center, MIT, Cambridge, MA 02139, USA
	<i>Integrated Photonics</i> <i>Session Chair: M. Kuwabara</i>
<b>8:50</b>	<b>THIN FILM FERROELECTRICS FOR GUIDED WAVE DEVICES</b> B.W. Wessels Dept. of Materials Science and Engineering and Materials Research Center, Northwestern University, Evanston IL 60208, USA
<b>9:20</b>	<b>PYROELECTRIC ARRAYS: CERAMICS AND THIN FILMS</b> R.W. Whatmore School of Industrial and Manufacturing Sciences, Cranfield University, Cranfield, Bedfordshire, MK43 0AL, United Kingdom
<b>9:50</b>	<b>INTEGRATION OF ELECTRO-OPTIC FERROELECTRICS ON Si(001) BY MOLECULAR BEAM EPITAXY</b> A. Meier*, F. Niu, B.W. Wessels Dept. of Materials Science and Engineering and Materials Research Center Northwestern University, Evanston IL 60208-3108
<b>10:10</b>	<b>LARGE PYROELECTRICITY IN SUB-NANOCRYSTALLINE THIN BaTiO<sub>3</sub> FILMS</b> I. Lubomirsky*, <sup>1</sup> V. Lyahovitskaya <sup>1</sup> , I. Zon <sup>1</sup> , Y. Feldman <sup>1</sup> , S. Cohen <sup>2</sup> <sup>1</sup> Dept. of Materials and Interfaces, Weizmann Institute of Science, Rehovot, 76100, Israel <sup>2</sup> Dept. of Chemical Services, Weizmann Institute of Science, Rehovot, 76100, Israel
<b>10:30- 11:00</b>	<b>Break</b>
	<i>Integrated Photonics - continued</i> <i>Session Chairs: T. Moustakas</i> <i>N. Shibata</i>
<b>11:00</b>	<b>LOCAL STRUCTURE AND SHAPING OF FERROELECTRIC DOMAIN WALLS FOR MICROPHOTONICS</b> D. Scrymgeour, S. Kim, V. Gopalan* Pennsylvania State University, University Park, PA, USA
<b>11:30</b>	<b>BaTiO<sub>3</sub>-BASED FILMS FOR ELECTRO-OPTIC APPLICATIONS</b> Y. Avrahami* and H.L. Tuller Crystal Physics and Electroceramics Laboratory, Dept. of Materials Science and Engineering, MIT, 77 Massachusetts Ave. Cambridge, MA 02139, USA
<b>11:50</b>	<b>Ca SUBSTITUTED PbTiO<sub>3</sub> THIN FILMS FOR INFRARED DETECTORS</b> T.C. Goel*, <sup>1</sup> S. Chopra <sup>1</sup> , S. Sharma <sup>1</sup> and R.G. Mendiratta <sup>2</sup> <sup>1</sup> Advanced Ceramics Laboratory, Dept. of Physics, Indian Institute of Technology, New Delhi-110016, India <sup>2</sup> Netaji Subhas Institute of Technology, Dwarka, New Delhi-110 045, India
<b>12:10- 14:00</b>	<b>Lunch</b>

	<p><i>High K Dielectrics</i>  <i>Session Chairs: H. Nagata</i>  <i>G.E. Jang</i></p>
14:00	<p><b>PROGRESS IN THE STUDIES OF HIGH-K GATE DIELECTRICS FOR MOSFET APPLICATIONS</b>  Z.G. Liu  Laboratory of Solid State Microstructures, Nanjing University, Nanjing 210093, China</p>
14:30	<p><b>THICKNESS-DEPENDENT DIELECTRIC CONSTANTS AND ELECTRON TRANSPORT OF (Ba,Sr)TiO<sub>3</sub> THIN FILM CAPACITORS HAVING Pt AND CONDUCTING OXIDE ELECTRODES</b>  C.S. Hwang*, K.H. Ahn and W. Park  School of Materials Science and Engineering, and Inter-university Semiconductor Research Center, Seoul National University, Seoul 151-742, South Korea</p>
15:00	<p><b>MODELLING THE DEPOSITION OF HIGH-K DIELECTRIC FILMS BY FIRST PRINCIPLES</b>  S.D. Elliott* and H.P. Pinto  NMRC, University College Cork, Lee Maltings, Prospect Row, Cork, Ireland</p>
15:20	<p><b>CURRENT CONDUCTION AND DIELECTRIC BEHAVIOR OF HIGH K-Y<sub>2</sub>O<sub>3</sub> FILM INTEGRATED WITH Si USING CHEMICAL VAPOR DEPOSITION FOR MEMORY CAPACITOR APPLICATIONS</b>  A.C. Rastogi* and S.B. Desu  Dept. of Electrical and Computer Engineering, University of Massachusetts, Amherst, MA 01003, USA</p>
15:40	<p><b>ELECTRONIC CONDUCTIVITY AND DIELECTRIC PROPERTIES OF NANOCRYSTALLINE CeO<sub>2</sub> FILMS</b>  J. Lappalainen*<sup>1,2</sup>, H.L. Tuller<sup>1</sup> and V. Lantto<sup>2</sup>  <sup>1</sup>Crystal Physics and Electroceramics Laboratory, Dept. of Material Science and Engineering, MIT, 77 Massachusetts Avenue, Cambridge, MA 02139, USA  <sup>2</sup>Microelectronics and Materials Physics Laboratories, P.O. Box 4500, FIN-90014, University of Oulu, Finland</p>
16:00-16:30	<p><b>Break</b></p>
	<p><i>Microwave Devices</i>  <i>Session Chair: Y.C. Chen</i></p>
16:30	<p><b>ELECTROCERAMICS IN RF-MEMS AND MICROWAVE ELECTRONICS</b>  (Combined with Session 2)  N. Setter*, P. Muralt, R. Lanz, C. Astafiev, V. Janakiraman, V. Cherman, A.K. Tagantsev  Ceramics Laboratory, Materials Institute, Faculty of Engineering, EPFL, Swiss Federal Institute of Technology, 1015 Lausanne, Switzerland</p>
17:00	<p><b>NONLINEAR MICROWAVE PROPERTIES OF FERROELECTRIC THIN FILMS</b>  R. Wördenweber*, R. Ott, and P. Lahl  ISG, FZ-Jülich, 52425 Jülich, Germany</p>
17:20	<p><b>POTENTIAL OF BZT THIN FILMS FOR TUNABLE MICROWAVE APPLICATIONS</b>  J. Xu*, W. Meneklou and E. Ivers-Tiffée  Institut für Werkstoffe der Elektrotechnik, Universität Karlsruhe (TH), 76131 Karlsruhe, Germany</p>

	<p><i>Photonic Devices</i>  <i>Session Chairs: T. Goel</i>  <i>R. Whatmore</i></p>
9:00	<p><b>WIDE BAND GAP III-V NITRIDE SEMICONDUCTORS: PHOTONIC AND ELECTRONIC APPLICATIONS</b>  T.D. Moustakas  Dept. of Electrical and Computer Engineering, Center of Photonics Research, Boston University, 8 St. Mary's St., Boston, MA 02215, USA</p>
9:30	<p><b>NOVEL PHOTOINDUCED PHENOMENA IN CHALCOGENIDE GLASSES</b>  H. Jain  Dept. of Materials Science and Engineering, Lehigh University, Bethlehem, PA 18015, USA</p>
10:10	<p><b>EFFECT OF THICKNESS ON THE ELECTRICAL AND OPTICAL PROPERTIES OF Sb DOPED SnO<sub>2</sub> (ATO) THIN FILM</b>  T.R. Giraldi<sup>1</sup>, J.A. Varela<sup>1</sup>, C.A. Paskocimas<sup>1</sup>, V. Bouquet<sup>3</sup>, E.R. Leite<sup>*2</sup>, E. Longo<sup>2</sup>  <sup>1</sup>CMDMC/LIEC/ IQ - Unesp – R. Prof. Francisco Degni, s/n – Araraquara-SP-Brazil  <sup>2</sup>CMDMC/LIEC/ DQ UFSCar – Av. Washington Luiz, km 235 – São Carlos-SP-Brazil  <sup>3</sup>UNIVERSITY OF RENNES, Rennes, France</p>
10:30-11:00	Break
	<p><i>Advanced Characterization Methods</i>  <i>Session Chair: C-B. Eom</i></p>
11:00	<p><b>NANO-FERROS / NANO-OPTICS – DIELECTRIC AND OPTICAL PROPERTIES IN FERROELECTRICS DETERMINED BY SCANNING PROBE TECHNIQUES ON THE NANOMETER SCALE</b>  F. Schlaphof* and L.M. Eng  Institute of Applied Photophysics, TU Dresden, D-01062 Dresden, Germany</p>
11:30	<p><b>MICROWAVE DIELECTRIC MECHANISM STUDIED BY MICROWAVE NEAR-FIELD MICROSCOPY AND RAMAN SPECTROSCOPY</b>  Y-C. Chen<sup>*1</sup>, Y-S. Hsieh<sup>1</sup>, H-F. Cheng<sup>1</sup>, C-T. Chia<sup>1</sup>, and I-N. Lin<sup>2</sup>  <sup>1</sup>Dept. of Physics, National Taiwan Normal University, Taipei 116, Taiwan, R.O.C.  <sup>2</sup>Materials Science Center, National Tsing-Hua University, Hsinchu 300, Taiwan, R.O.C.</p>
11:50	<p><b>THE INFLUENCE OF DISTRIBUTED LOADING AND CANTILEVER ANGLE IN PIEZO-FORCE MICROSCOPY</b>  B.D. Huey<sup>*1</sup>, J. Blendell<sup>1</sup>, G. White<sup>1</sup>, C. Ramanujan<sup>2</sup>, M. Bobji<sup>2</sup>, A. Kulik<sup>3</sup>  <sup>1</sup>NIST Ceramics Division, Gaithersburg, MD 20899, USA  <sup>2</sup>Oxford University Dept. of Materials, Parks Road, Oxford OX1-3PH, United Kingdom  <sup>3</sup>EPFL Inst. of Physics, Lausanne CH-1015, Switzerland</p>
12:10-13:30	Lunch

	<i>Thin Film Processing and Characterization</i> <i>Session Chair: H-U. Habermaier</i>
<b>13:30</b>	<b>CHEMICAL SOLUTION DEPOSITION OF PEROVSKITE THIN FILMS</b> R.W. Schwartz University of Missouri – Rolla, Dept. of Ceramic Engineering, Rolla, MO 65409-0330, USA
<b>14:00</b>	<b>SrTiO<sub>3</sub> BASED SIDE GATE FIELD EFFECT TRANSISTOR REALIZED BY A NOVEL SUBMICRON SCALE AFM PATTERNING TECHNIQUE</b> L. Pellegrino*, E. Bellingeri, I. Pallecchi, A.S. Siri, D. Marré Dipartimento di Fisica, Università di Genova, via Dodecaneso 33 16146 Genova, Italy INFN-LAMIA, Corso Perrone 24, 16152 Genova, Italy
<b>14:20</b>	<b>SYNTHESIS AND PROPERTIES OF (Bi,Nd)<sub>4</sub>Ti<sub>3</sub>O<sub>12</sub> THIN FILMS BY CHEMICAL SOLUTION DEPOSITION</b> W. Sakamoto* <sup>1</sup> , M. Yamada <sup>2</sup> , K. Kikuta <sup>2</sup> , T. Yogo <sup>1</sup> , T. Hayashi <sup>3</sup> , S. Hirano <sup>2</sup> , et al. <sup>1</sup> Center for Integrated Research in Science and Engineering, Nagoya University, Furo-cho, Chikusa-ku, Nagoya, 464-8603 Japan <sup>2</sup> Dept. of Applied Chemistry, Graduate School of Engineering, Nagoya University Furo-cho, Chikusa-ku, Nagoya, 464-8603 Japan <sup>3</sup> 1-1-25 Tsujido-Nishikaigan, Fujisawa, Dept. of Material Science, Shonan Institute of Technology, Kanagawa, 251-8511 Japan
<b>14:40</b>	<b>DIRECT CHARACTERIZATION OF FERROELECTRIC TEXTURE INDUCED DURING POLING</b> J.L. Jones*, T.M. Finch, T.S. Key, E.B. Slamovich, K.J. Bowman Materials Engineering, Purdue University, West Lafayette, Indiana, USA, USA
<b>15:00</b>	<b>RAMAN SPECTROSCOPY STUDIES ON CaTiO<sub>3</sub>-BASED MICROWAVE CERAMICS</b> H. Zheng* <sup>1</sup> , I. M. Reaney <sup>1</sup> , R. Ubbelohde <sup>2</sup> and J. Yarwood <sup>3</sup> <sup>1</sup> Dept. of Engineering Materials, University of Sheffield, Sheffield, S1 3JD, United Kingdom <sup>2</sup> Dept. of Materials, Queen Mary, University of London, London, E1 4NS, United Kingdom <sup>3</sup> Materials Research Institute, Sheffield Hallam University, Sheffield, S1 1WB, United Kingdom
<b>15:20 – 15:50</b>	<b>Break</b>
	<i>Thin Film Processing and Characterization - continued</i> <i>Session Chair: H. Haneda</i>
<b>15:50</b>	<b>IN-SITU TEM INVESTIGATION OF STRUCTURAL CHANGE OF ZIRCONIA/SILICON HETEROSTRUCTURE</b> T. Kiguchi* <sup>1</sup> , N. Wakiya <sup>2</sup> , K. Shinozaki <sup>2</sup> , and N. Mizutani <sup>1,2</sup> <sup>1</sup> Center for Advanced Materials Analysis, Tokyo Institute of Technology, Japan <sup>2</sup> Dept. of Metallurgy and Ceramic Science, Tokyo Institute of Technology, O-okayama, Meguro-ku, Tokyo, Japan
<b>16:10</b>	<b>EFFECT OF STRAIN GRADATION ON LUMINESCENCE AND ELECTRONIC PROPERTIES OF PULSED LASER DEPOSITED EPITAXIAL ZINC OXIDE THIN FILMS</b> A.C. Rastogi* <sup>1</sup> , S.B. Desu <sup>1</sup> , P. Bhattacharya <sup>2</sup> , R.S. Katiyar <sup>2</sup> <sup>1</sup> Dept. of Electrical and Computer Engineering, University of Massachusetts, Amherst, MA 01003, USA <sup>2</sup> Dept. of Physics, University of Puerto Rico, Rio Piedras, P.R. 00931
<b>16:30</b>	<b>PREPARATION OF ZINC OXIDE BASED MULTI LAYER THIN FILMS</b> H. Ryoken* <sup>1</sup> , N. Ohashi <sup>2</sup> , H. Haneda <sup>2</sup> , Y. Adachi <sup>2</sup> , T. Takenaka <sup>1</sup> <sup>1</sup> Tokyo University of Science, 2641 Yamazaki, Noda, Chiba 278-0022, Japan <sup>2</sup> National Institute for Materials Science/Advance Materials Laboratory, 1-1 Namiki, Tsukuba, Ibaraki 305-0044 Japan

	<i>Controlled Microstructure Piezoelectrics</i> <i>Session Chair: Y-M. Chiang</i>
<b>9:00</b>	<b>ORIENTED PIEZOELECTRIC CERAMICS AND FILMS</b> S. Trolier-McKinstry*, E. Sabolsky, C. Duran, S. Kwon, G.L. Messing, J. Nino, T. Yoshimura, and N. Bassiri Gharb Materials Science and Engineering Dept. and Materials Research Institute, Penn State University, PA, USA
<b>9:30</b>	<b>GRAIN GROWTH AND BOUNDARY MIGRATION IN STRONTIUM TITANATE</b> A.M. Scotch*, J.S. Wallace, and J.E. Blendell NIST, Ceramics Division, Gaithersburg, MD 20899-8522
<b>9:50</b>	<b>NEW RESULTS OF MEASUREMENTS OF THE <math>d_{33}</math> PIEZOELECTRIC COEFFICIENT OF THE PZT FILM-Si/SiO<sub>2</sub>/Ti/Pt SUBSTRATES</b> J. Nosek* <sup>1</sup> , M. Sulc <sup>1</sup> , L. Burianova <sup>1</sup> , C. Soyer <sup>2</sup> , E. Cattani <sup>2</sup> , D. Remiens <sup>2</sup> <sup>1</sup> Technical University Liberec, International Center for Piezoelectric Research, Hálkova 6, CZ-461 17 Liberec 1, Czech Republic <sup>2</sup> Université de Valenciennes, IEMN – DOAE - MIMM, F-59600 Maubeuge, France
<b>10:10</b>	<b>TEMPLATED GRAIN GROWTH OF TEXTURED PIEZOELECTRIC CERAMICS</b> G.L. Messing*, E. Sabolsky, S.T. Kwon, C. Duran, H. Yilmaz and S. Trolier-McKinstry Dept. of Materials Science and Engineering, Materials Research Institute, The Pennsylvania State University, University Park, PA, 16802, USA
<b>10:30-11:00</b>	<b>Break</b>
	<i>Advanced Characterization Methods</i> <i>Session Chair: F. Schlaphof</i>
<b>11:00</b>	<b>PYROELECTRIC ELECTRON EMISSION BEHAVIOR OF FERROELECTRIC MATERIALS</b> E.M. Bourim* <sup>1</sup> , D-W. Kim <sup>1</sup> , V.A. Sidorkin <sup>1,2</sup> , C.W. Moon <sup>1</sup> and In K. Yoo <sup>1</sup> <sup>1</sup> U-Team, Samsung Advanced Institute of Technology, P. O. Box 111, Suwon 440-600, Korea <sup>2</sup> Dept. of Physics, Voronezh State University 394006, University Square 1, Voronezh, Russia
<b>11:20</b>	<b>RAMAN SCATTERING STUDY OF THE Pb(Hf<sub>x</sub>Ti<sub>1-x</sub>)O<sub>3</sub> CERAMICS</b> J. Frantti* <sup>1</sup> , Y. Fujioka <sup>1</sup> , S. Eriksson <sup>2</sup> , V. Lantto <sup>3</sup> , and M. Kakihana <sup>1</sup> <sup>1</sup> Materials and Structures Laboratory, Tokyo Institute of Technology, 4259 Nagatsuta, Midori-ku, Yokohama, 226-8503, Japan <sup>2</sup> Studsvik Neutron Research Laboratory, Uppsala University, SE-611 82, Nyköping, Sweden <sup>3</sup> Microelectronics and Materials Physics Laboratories, University of Oulu, Linnanmaa, P.O. Box 4500, FIN-90014 University of Oulu, Finland
<b>11:40</b>	<b>STRUCTURE-PROPERTY RELATIONSHIPS IN HEXAGONAL-BASED PEROVSKITES</b> D.C. Sinclair Dept. of Engineering Materials, University of Sheffield, S1 3JD United Kingdom
<b>12:00</b>	<b>STRUCTURAL STABILITY VERSUS PRESSURE AND TEMPERATURE IN THE PZT PHASE DIAGRAM</b> P. Papet*, J. Rouquette, V. Bornand, M. Pintard and J. Haines Université de Montpellier II, place Eugène Bataillon, cc 003 F-34095 MONTPELLIER Cedex 5, France/ Laboratoire de Physicochimie de la Matière Condensée LPMC UMR CNRS 5617