



European Materials Research Society

# Spring Meeting 2022

May 30 | June 3  
Virtual Conference

## SYMPOSIUM N

Synthesis, processing and characterization  
of nanoscale multi functional oxide films VIII and 6th E-MRS  
& MRS-J bilateral symposium

*Symposium Organizers :*

Fabio MILETTO GRANOZIO, CNR-SPIN

Hiroaki NISHIKAWA, Kindai University

Maryline GUILLOUX-VIRY, University of Rennes 1

Nobuyuki IWATA, College of Science & Technology, Nihon University

Samuel S. MAO, University of California at Berkeley

Tetsuya YAMAMOTO, Kochi University of Technology

Valentin CRACIUN, INFLPR

<b>Monday may 30</b>			
<b>08:45</b>	<b>Welcome and Introduction to the Symposium</b>		
	<b>Growth of thin films : V Craciun, T. Yamamoto</b>		
<b>09:00</b>	<b>INV Growth Mechanism of mist CVD</b> Toshiyuki Kawaharamura Kochi Univ. of Tech., Res. Inst., Kochi Univ. of Tech, Japan	<b>N 1.1</b>	
<b>09:30</b>	<b>Crystallinity Spread of Compositionally Graded Na<sub>1-x</sub>TaO<sub>3</sub> δ Fabricated by Chemical Beam Vapor Deposition</b> Corrado Garlisi (1), Petru Lunca Popa (1), Kevin Menguelti (1), Vincent Roge (1), Marc Michel (1), Estelle Wagner (2), William Maudez (2), Giacomo Benvenuti (2), Bianca Rita Pistillo (1), Emanuele Barborini (1). (1) Materials Research and Technology (MRT) Department, Luxembourg Institute of Science and Technology (LIST), L-4422 Belvaux, Luxembourg. (2) 3D-Oxides, F-01630, Saint-Genis-Pouilly, France.	<b>N 1.2</b>	
<b>09:45</b>	<b>Spectroscopic study of thermochromic SmNiO<sub>3</sub> thin films synthesized by magnetron sputtering with a soft air post-annealing</b> Zil Fernández-Gutiérrez * (a), Stéphanie Bruyère (a), Emile Haye (b), David Pilloud (a), Silvère Barrat (a), Fabien Capon (a) (a) Université de Lorraine, CNRS, IJL, F-54000 Nancy, France (b) Laboratoire d'Analyse par Réactions Nucléaires (LARN), Namur Institute of Structured Matter (NISM) University of Namur, 61 Rue de Bruxelles, 5000 Namur, Belgium	<b>N 1.3</b>	
<b>10:00</b>	<b>Spatial Atomic Layer Deposition of Tubular Membranes</b> Fidel Toldra-Reig, Clément Lausecker, Matthieu Weber, Mikhael Bechelany, David Muñoz-Rojas Université Grenoble Alpes, CNRS, Grenoble INP, LMGP, F-38000 Grenoble, France (Fidel Toldra-Reig, Clément Lausecker, Matthieu Weber, David Muñoz-Rojas) Institut Européen des Membranes, IEM, UMR-5635, Université de Montpellier, CNRS, ENSCM, Place Eugène Bataillon 34095 Montpellier cedex 5, France (Clément Lausecker, Mikhael Bechelany)	<b>N 1.4</b>	
<b>10:15</b>	<b>Optimization of low-cost spray pyrolysis for producing high-quality FTO films following a Design of Experiments methodology</b> M. Monteiro (1), J. R. S. Barbosa (1), D. Mesquita (1,2), J. A. M. Eriksson (1,3), C. Matos (1,4), A. J. N. Oliveira (1,5,6), K. Oliveira (1), A. Vilanova* (1), P. A. Fernandes (1,5,7) & P. M. P. Salomé (1,6) *presenting person (1) INL ? International Iberian Nanotechnology Laboratory, Avenida Mestre José Veiga, 4715-330 Braga, Portugal, (2) Departamento de Engenharia, Universidade do Minho, Campus de Azurém, 4800?058 Guimarães, Portugal, (3) Biology Education Centre, Uppsala University, Norbyvägen 14, 752 36 Uppsala, Sweden, (4) Departamento de Ciências dos Materiais, Nova School of Science and Technology, Universidade NOVA de Lisboa, 2829-516 Caparica, Portugal, (5) i3N, Universidade de Aveiro, Campus Universitário de Santiago, 3810-193 Aveiro, Portugal, (6) Departamento de Física, Universidade de Aveiro, Campus Universitário de Santiago, 3810-193 Aveiro, Portugal, (7) CIETI, Departamento de Física, Instituto Superior de Engenharia do Porto, Instituto Politécnico do Porto, 4200-072, Porto, Portugal,	<b>N 1.5</b>	
<b>10:30</b>	<b>Discussion</b>		
	<b>Advanced characterization techniques : V Craciun</b>		
<b>10:45</b>	<b>INV Schottky barriers on ZnO: Fermi level pinning by bulk and interface defects, influence of polarization and tunability</b> Andreas Klein Technical University of Darmstadt, Institute of Materials Science, 64287 Darmstadt, Germany	<b>N 2.1</b>	
<b>11:15</b>	<b>Using XPS and ToF-SIMS to Investigate ALD Prepared La Doped HfO<sub>2</sub> Thin Films Deposited on a Lateral High Aspect Ratio Structure</b> Jennifer Emara, Alireza M. Kia, Clemens Mart, Kati Kühnel, Nora Haufe, Wenke Weinreich Fraunhofer IPMS, An der Bartlake 5, Dresden 01109, Germany	<b>N 2.2</b>	
<b>11:30</b>	<b>Structural and chemical state analysis of amorphous and crystalline manganese oxide phases by combining XRD, RBS, XPS, HAXPES an</b> Roberto Cestaro*, Bastian Rheingans, Claudia Cancellieri, Lars P.H. Jeurgens, Patrik Schmutz Empa, Swiss Federal Laboratories for Materials Science and Technology, Laboratory for Joining Technologies and Corrosion, CH-8600 Dübendorf, Switzerland	<b>N 2.3</b>	
<b>11:45</b>	<b>Grain to grain heterogenities in PbZrTiO<sub>3</sub> thin film as probed by in-situ biasing XRD</b> Kien Nguyen, Steven Leake, Patrice Gergaud, Nicolas Vaxelaire Kien Nguyen, Patrice Gergaud, Nicolas Vaxelaire Univ. Grenoble Alpes, CEA, Leti, F-38000 Grenoble, France Steven Leake ESRF, The European Synchrotron, 71 Avenue des Martyrs, CS40220, CEDEX 9, 38043 Grenoble, France		<b>N 2.4</b>
<b>12:00</b>	<b>Ferromagnetism in Nd<sub>2</sub>NiMnO<sub>6</sub>/La<sub>2</sub>NiMnO<sub>6</sub> superlattices grown by RHEED-enabled sputtering</b> Jonathan Spring, Simon Joehr, Marta Gibert University of Zurich, Switzerland, University of Zurich, Switzerland, Technical University of Vienna, Austria		<b>N 2.5</b>
<b>12:15</b>	<b>Discussion and Lunch</b>		
	<b>Ferroelectric thin films I : Maryline Guilloux-Viry</b>		
<b>13:45</b>	<b>INV Ferroelectric two-dimensional electron gases</b> Manuel Bibes Unité Mixte de Physique CNRS/Thales, Université Paris-Saclay, 91767 Palaiseau, France		<b>N 3.1</b>
<b>14:15</b>	<b>Atomic scale identification of the polarisation reversal mechanism in multiferroic gallium ferrite thin films</b> X. Devaux (1), C. Bouillet (2), S. Homkar (2), S. Migot (1), A. Demchenko(2), Ch. Lefevre (2), F. Roulland (2), D. Preziosi (2), N. Viart (2) (1) Université de Lorraine, CNRS, Institut Jean Lamour (IJL), Nancy, France (2) Université de Strasbourg, CNRS, Institut de Physique et Chimie des Matériaux de Strasbourg (IPCMS), Strasbourg, France		<b>N 3.2</b>
<b>14:30</b>	<b>Ferroelectric Ge-doped HfO<sub>2</sub> by HfO<sub>2</sub> capping</b> Catalin Palade (1), Ana-Maria Lepadatu (1), Adrian Slav (1), Ovidiu Cojocaru (1,2), Alin Iuga (1), Valentin Adrian Maraloiu (1), Antoniu Moldovan (3), Maria Dinescu (3), Valentin Serban Teodorescu (1,4), Toma Stoica (1), Magdalena Lidia Ciurea (1,4) (1) National Institute of Materials Physics, 077125 Magurele, Romania, (2) University of Bucharest, Faculty of Physics, 077125 Magurele, Romania, (3) National Institute for Laser, Plasma and Radiation Physics, 077125 Magurele, Romania, (4) Academy of Romanian Scientists, 050094 Bucharest, Romania		<b>N 3.3</b>
<b>14:45</b>	<b>Thickness-independence of the characteristic AFE domain dimensions in PbZrO<sub>3</sub> epitaxial thin-films determined by X-ray nanoscopy</b> Jamil E. Flores Gonzales (1), Alexander E. Ganzha (1), Maria A. Knyazeva (1), Daria A. Andronikova (1), Alexander F. Vakulenko (1), Arvind Dasgupta (2), Ran Gao (2), Carlsten Richter (3) and Roman G. Burkovsky (1) 1. Peter the Great St.Petersburg Polytechnic University, St.Petersburg, Russian Federation. 2. Materials Science and Engineering, University of California, Berkeley, Berkeley, CA, United States. 3. Leibniz Institute for Crystal Growth, Berlin, Germany.		<b>N 3.4</b>
<b>15:00</b>	<b>Tailoring the electronic properties of perovskite nickelate thin films through ferroelectric field effects</b> G. Krieger <sup>1</sup> , C. P. Su <sup>2</sup> , L. Schlur <sup>1</sup> , R. Fan <sup>3</sup> , P. Steadman <sup>3</sup> , A. Gloter <sup>2</sup> , N. Viart <sup>1</sup> and D. Preziosi <sup>1</sup> 1 Université de Strasbourg, CNRS, IPCMS, UMR 7504, F-67000 Strasbourg, France. 2 Laboratoire de Physique des Solides, CNRS, UMR 8502, Université Paris-Sud, F-91405 Orsay Cedex, France. 3 Diamond Light Source Ltd., Harwell Science and Innovation Campus, Chilton, Didcot, Oxfordshire OX11 0DE, United Kingdom.		<b>N 3.5</b>
<b>15:15</b>	<b>Discussion</b>		
	<b>Ferroelectric thin films II : M Bibes</b>		
<b>15:30</b>	<b>Band structure tuning at (La,Sr)MnO<sub>3</sub> / (Ba,Sr)TiO<sub>3</sub> interface</b> J. Wolfman (1), A. Ruyter (1), B. Negulescu (1), P. Andrezza (2), X. Wallart (3), S. Schamm-Chardon (4), R. Cours (4), T. Hungria (5) and C. Autret-Lambert (1) 1 GREMAN, UMR7347 CNRS, Univ. de Tours, Parc de Grandmont, F-37200 Tours, France, 2 ICMN, UMR 7374 CNRS, Univ. d'Orléans, 1b rue de la Férrollerie, F-45071 Orléans, France, 3 Univ. Lille, CNRS, Centrale Lille, ISEN, Univ. Valenciennes, UMR 8520 -IEMN, F-59000 Lille, France, 4 CEMES-CNRS and Univ. de Toulouse, 29 rue Marvig, BP 94347, 31055 Toulouse Cedex, France, 5 Centre Raimond Castaing et Univ. de Toulouse, 3, rue Caroline Aigle, 31400 Toulouse, France,		<b>N 4.1</b>
<b>15:45</b>	<b>Shallow electron traps in ferroelectric HfO<sub>2</sub> and HfZrO<sub>4</sub></b> Izmailov, R.A.*(1), O'Sullivan, B.J.(2), Popovici, M.I.(2) & Afanas'ev, V.V.(1) (1)KU Leuven, Belgium, (2)imec, Belgium		<b>N 4.2</b>

16:00	<b>How to play on the fabrication process of HfZrO<sub>2</sub> ferroelectric thin film to enhance its physical properties</b> Jordan Bouaziz, Greta Segantini, Benoit Manchon, Rabei Barhoumi, Ingrid Canero Infante, Damien Deleruyelle, Nicolas Baboux, Pedro Rojo Romeo, Bertrand Vilquin Université de Lyon, Ecole centrale de Lyon, INSA Lyon, CNRS, Institut des nanotechnologies de Lyon UMR 5270, 69130 Ecully, France	N 4.3
16:15	<b>Tailoring polar domains in Sr<sub>1-x</sub>BaxMnO<sub>3-δ</sub> epitaxial thin films</b> Panagiotis Koutsogiannis, Pedro A. Algarabel, José A. Pardo and César Magén 1. Instituto de Nanociencia y Materiales de Aragón (INMA), CSIC-Universidad de Zaragoza, 50009 Zaragoza, Spain 2. Laboratorio de Microscopias Avanzadas (LMA), Universidad de Zaragoza, 50018 Zaragoza, Spain 3. Departamento de Física de la Materia Condensada, Universidad de Zaragoza, 50018 Zaragoza, Spain 4. Departamento de Ciencia y Tecnología de Materiales y Fluidos, Universidad de Zaragoza, 50018 Zaragoza, Spain	N 4.4
16:30	<b>Micro/nanostructured piezoelectric α-quartz thin films on silicon</b> David Sánchez-Fuentes* (1), Q. Zhang (1), C. Jolly (1), R. Desgarceaux (1), A. Gomez (2), M. Gich, (2) A.Carretero-Genevriér. (1) (1) Institut d'Electronique et des Systemes (IES), CNRS, Université de Montpellier, 860 Rue de Saint Priest 34095 Montpellier, France (2) Institut de Ciència de Materials de Barcelona ICMA, Consejo Superior de Investigaciones Científicas CSIC, Campus UAB 08193 Bellaterra, Catalonia, Spain * lead presenter	N 4.5
16:45	<b>Discussion</b>	

Tuesday may 31

Functional films : N Iwata

09:00	<b>INV Functional oxide thin films grown on two-dimensional material toward transferable electronics</b> Hidekazu Tanaka*(1), Shingo Genchi (1), Ai I. Osaka (1), Azusa N. Hattori (1), Kenji Watanabe (2), Takashi Taniguchi (2) (1) SANKEN (Institute of Scientific and Industrial Research), Osaka University (2) International Center for Materials Nanoarchitectonics, National Institute for Materials Science	N 5.1
09:30	<b>N:BaTiO<sub>3</sub> oxynitride epitaxial thin films for integrated opto-electronics</b> Blaess, C. *(1), Matzen, S.(2), Lin, H.(1), Creutzer, G.(1), Derj, A.(1), Magnan, H.(1), Moussy, J-B.(1), Mocuta, C.(3), Charra, F.(1), Silly, M.(3) & Barbier, A.(1). (1) Service de Physique de l'Etat Condensé, UMR 3680 CEA-CNRS, Gif-sur-Yvette, France (2) Center for Nanoscience and Nanotechnology (C2N) UMR CNRS – Paris-Saclay University, Palaiseau, France (3) Synchrotron SOLEIL, L'Orme des Merisiers Saint-Aubin BP48, Gif-sur-Yvette, France	N 5.2
09:45	<b>Infinite layered nickelates structure and magnetism</b> Alvaro Adrian Carrasco Alvarez, Sebastien Petit, Lucia Iglesias, Wilfrid Prellier, Manuel Bibes, Julien Varignon (1) (2) , (1) , (2) , (1) , (2) , (1) (1) Laboratoire CRISMAT, CNRS UMR 6508, ENSICAEN, Normandie Université, 6 boulevard Marechal Juin, F-14050 Caen Cedex 4, France (2) Unite Mixte de Physique, CNRS, Thales, Université Paris Sud, Université Paris-Saclay, F-91767 Palaiseau, France	N 5.3
10:00	<b>Infinite-layer nickelate: the influence of the capping-layer through the study of physical properties</b> Guillaume Krieger, Jérôme Robert, Gilles Versini, Nathalie Viart, Daniele Preziosi Institut de Physique et Chimie des Matériaux de Strasbourg, Strasbourg, France	N 5.4
10:15	<b>Impact of grain orientation on the local magnetic properties of through Combinatorial Substrate Epitaxy approach.</b> Marie EL RAMI *(1), Marie DALLOCCIO(1), Adrian DAVID(1), Ulrike LUDERS(1), Rosine COQ GERMANICUS(1), Wilfrid PRELLIER(1), Antoine RUYTER(1), Arnaud FOUCHET(1). (1) NORMANDIE UNIV, ENSICAEN, UNICAEN, CNRS, CRISMAT, 14000 CAEN, FRANCE. * lead presenter	N 5.5
10:30	<b>Discussion</b>	
<b>Functional films II : Tanaka Hidekazu</b>		
10:45	<b>Floating solar-activated TiO<sub>2</sub> nano-photocatalysts grown on cork for water purification</b> M.L. Matias <sup>1</sup> , A. Pimentel <sup>1</sup> , F. X. Vasconcelos <sup>1</sup> , A. Machado <sup>2</sup> , J. Rodrigues <sup>3</sup> , E. Fortunato <sup>1</sup> , R. Martins <sup>1*</sup> , D. Nunes <sup>1*</sup> 1. CENIMATI <sup>3</sup> N, Department of Materials Science, School of Science and Technology, NOVA University Lisbon and CEMOP/UNINOVA, Caparica, Portugal 2. LAQV-REQUIMTE, Department of Chemistry (DQ), NOVA School of Science and Technology, Universidade NOVA de Lisboa, Campus de Caparica, 2829-516 Caparica, Portugal. 3. Physics Department & I3N, Aveiro University, Campus Universitário de Santiago, 3810-193 Aveiro, Portugal	N 6.1
11:00	<b>Photocatalytic properties of doped TiO<sub>2</sub> nanowires</b> Federico Giuffrida <sup>12</sup> , Lucia Calcagno <sup>1</sup> , Giuliana Impellizzeri <sup>2</sup> , Antonio Alessio Leonardi <sup>12</sup> and Massimo Zimbone <sup>2</sup> <sup>1</sup> Dipartimento di Fisica e Astronomia, University of Catania, Via S. Sofia, 64, 95124, Catania, Italy, <sup>2</sup> CNR-IMM Catania University, Via S. Sofia, 64, 95124, Catania, Italy	N 6.2
11:15	<b>Enlightening the Bimetallic Effect of Au@Pd Nanoparticles on Ni Oxide nanostructured films with Enhanced Catalytic Activity</b> Bruno, L.*(1,2), Scuderi, M.(3), Priolo, F.(1,2), Falciola, L. (4) & Mirabella, S.(1,2) (1) Dipartimento di Fisica e Astronomia "Ettore Majorana", Università di Catania, via S. Sofia 64, 95123 Catania, Italy, (2) CNR-IMM, via S. Sofia 64, 95123 Catania, Italy, (3) CNR-IMM, VIII strada 5, 95121 Catania, Italy, (4) Dipartimento di Chimica, Università degli Studi di Milano, Via Golgi 19, 20133 Milano, Italy.	N 6.3

11:30	<b>X-ray nanobeam effects on TiO<sub>2</sub> and SrTiO<sub>3</sub> at 17.5 keV</b> Andrea Alessio* (1), Valentina Bonino (2), Thomas Heisig (3)(4), Federico Picollo (1), Daniele Torsello (5)(6), Lorenzo Mino (7), Gema Martinez-Criado (2)(8), Regina Dittman (3)(4), Marco Truccato (1) (1) Department of Physics, Interdepartmental Centre NIS, University of Torino, Italy, (2) European Synchrotron Radiation Facility – Experiments Division, Grenoble, France, (3) Forschungszentrum Juelich GmbH, Peter Gruenberg Institute 7, D-52425 Juelich, Germany, (4) JARA-FIT, RWTH Aachen University, D-52056 Aachen, Germany, (5) Department of Applied Science and Technology, Politecnico di Torino, 10129 Turin, Italy, (6) Istituto Nazionale di Fisica Nucleare, Sezione di Torino, 10125 Turin, Italy, (7) Department of Chemistry, Interdepartmental Centre NIS and INSTM, University of Torino, Italy, (8) Instituto de Ciencia de Materiales de Madrid, Consejo Superior de Investigaciones Científicas, 28049 Cantoblanco, Spain	N 6.4	16:00	<b>Developing tailorable oxide thin films by pulsed laser depositions</b> Stefan Andrei Irimiciuc(1), Gabriela Dorcioman(1), Petronela Garoi(1), Jan Lancok(2), Sergii Chertopalov(2), Valentin Craciun(1,3) 1National Institute for Laser, Plasma and Radiation Physics – NILPRP, 409 Atomistilor Street, Bucharest, Romania 2Institute of Physics of the Czech Academy of Sciences, Na Slovance 1999/2, Prague, Czech Republic 3Extreme Light Infrastructure for Nuclear Physics, IFIN-HH, Magurele, Romania	N 7.5
			16:00	<b>Dependence of HfO<sub>2</sub>/IZO heterojunction band offsets on IZO composition</b> Gabriela Dorcioman1, Doina Craciun1, Radu Udrea2,3, Valentin Craciun1, 4 1National Institute for Laser, Plasma and Radiation Physics, Laser Department, 409 Atomistilor St., PO Box Magurele, Romania,2Apel Laser, Romania,3Facultatea de Fizica, Universitatea din Bucuresti, Romania, Extreme Light Infrastructure for Nuclear Physics, ELI-NP, IFIN-HH, Magurele, Romania	N 7.6
11:45	<b>Development of Nanolaminates for Carrier Selectivity</b> X. L. Pinheiro* (1,2), J. P. Teixeira (1), R. C. Vilão (2), A. J. N. Oliveira (1,3,4), K. Oliveira (1), M. A. Curado (1,2), M. Monteiro (1), T. S. Lopes (1,5,6,7), C. Matos (1,8), J. Lisboa (1,8), R. D. Pinto (1,8), P. A. Fernandes (1,4,9) & P. M. P. Salomé (1,3) (1) INL – International Iberian Nanotechnology Laboratory, Avenida Mestre José Veiga, 4715-330 Braga, Portugal (2) University of Coimbra, CFisUC, Department of Physics, R. Larga, P-3004-516 Coimbra, Portugal (3) Departamento de Física, Universidade de Aveiro, Campus Universitário de Santiago, 3810-193 Aveiro, Portugal (4) i3N, Universidade de Aveiro, Campus Universitário de Santiago, 3810-193 Aveiro, Portugal (5) Institute for Material Research (IMO), Hasselt University (partner in Solliance), Agoralaanbouw H, Diepenbeek, 3590, Belgium (6) Imec division IMOMEC (partner in Solliance), Wetenschapspark 1, 3590 Diepenbeek, Belgium (7) EnergyVille, ThorPark, Poort Genk, 8310 & 8320, 3600 Genk, Belgium (8) Departamento de Ciências dos Materiais, Nova School of Science and Technology, Universidade NOVA de Lisboa, 2829-516 Caparica, Portugal (9) CIETI, Departamento de Física, Instituto Superior de Engenharia do Porto, Instituto Politécnico do Porto, 4200- 072, Porto Portugal	N 6.5	16:00	<b>Effect of implantation of Ba<sup>+</sup> ions on the composition of the W(111) and WO<sub>2</sub> surfaces</b> B.E. Umirzakov, D.A. Tashmukhamedova, Z.A. Isakhanov, F.Y. Khudayqulov Tashkent State Technical University	N 7.7
			16:00	<b>Temperature dependance of polarisation and conduction mechanisms in ferroelectric Hf<sub>0.5</sub>Zr<sub>0.5</sub>O<sub>2</sub> thin film</b> Benoit Manchon123, Dorian Coffineau23, Greta Segantini1, Nicolas Baboux1, Pedro Rojo Romeo1, Rabei Barhoumi1, Ingrid C. Infante1, Yann Beilliard23, Fabien Alibert4, Dominique Drouin23, Damien Deleruyelle1, Bertrand Vilquin1 1 Univ. Lyon, Ecole centrale de Lyon, INSA Lyon, CNRS, UCBL, CPE Lyon, Institut des nanotechnologies de Lyon, UMR5270, 69130 Ecully, France 2 Institut Interdisciplinaire d'Innovation Technologique (3IT), Université de Sherbrooke, Sherbrooke, Québec, Canada 3 Laboratoire Nanotechnologies Nanosystèmes (LN2) CNRS UMI3463, Sherbrooke, Canada 4 Institute of Electronics, Microelectronics and Nanotechnology (IEMN), Université de Lille, Villeneuve d'Ascq, France	N 7.8
12:00	<b>Electrophoretic Deposition of Metal (Ti, Hf) Oxide Nanocrystals: Towards Particle-based Functional Thick Films</b> Yannick Dähler, Alessandro Lauria Laboratory for Multifunctional Materials, Department of Materials, ETH Zurich, Vladimir-Prelog-Weg 5, 8093 Zurich, Switzerland	N 6.6	16:00	<b>n-Ga<sub>2</sub>O<sub>3</sub>/p-GaSe heterojunctions: preparation technology vs. optical and photoelectrical properties</b> Vatavu, E.(1), Dmitroglu, L.(1,2), Sprincean, V.(1,3), Spoiälă, D.(2), Leca, L.(2), Caraman, M.(2,3), Vatavu, S.*(2,4) (1) Faculty of Physics and Engineering, Moldova State University, 60 A. Mateevici str., MD 2009, Chisinau, Moldova, (2) Physics of Semiconductors and Devices Lab, Faculty of Physics and Engineering, Moldova, Moldova State University, 60 A. Mateevici str., MD 2009, Chisinau, Moldova, (3) Environmental Physics and Modeling Complex Systems Research Lab, Faculty of Physics and Engineering, Moldova State University, 60 A. Mateevici str., MD 2009, Chisinau, Moldova, (4) CaRISMA Research Center, Faculty of Physics and Engineering, Moldova State University, 60 A. Mateevici str., MD 2009, Chisinau, Moldova	N 7.9
12:15	<b>Discussion</b>				
12:30	<b>Lunch and Plenary</b>				
	<b>I : S. Mao, T. Yamamoto</b>				
16:00	<b><math>\alpha</math>-phase gallium oxide thin films stabilized on a- and m-plane sapphire substrates via reactive magnetron sputtering and PLD</b> Edgars Butanovs, Martins Zubkins, Juris Purans Institute of Solid State Physics, University of Latvia, Kengaraga street 8, Riga, Latvia, LV-1063	N 7.1	16:00	<b>Optical and electrical properties of hydrogen doped indium oxide thin films</b> D. Dobrin, F. Gherendi, M. Magureanu and M. Nistor National Institute for Lasers, Plasma and Radiation Physics (NILPRP), L22, PO Box. MG-36, 077125 Bucharest-Magurele, Romania	N 7.10
16:00	<b>Hydrogen sensing effects of Cu:ZnO thin film deposited by sputtering with substrate heating</b> Yu-Zhan Weng1, Chun-Min Hsu1, Zhao-Hong Yang1,2, Tien-Chai Lin1, Wen-Chang Huang1,2,* 1Department of Electrical Engineering, Kun Shan University, No. 195, Kun-Da Rd., Yung-Kang Dist., Tainan, 71003, Taiwan, ROC 2Green Energy Technology Research Center, Kun Shan University, No. 195, Kun-Da Rd., Yung-Kang Dist., Tainan, 71003, Taiwan, ROC	N 7.2	16:00	<b>Metalorganic aerosol deposition of Ga<sub>2</sub>O<sub>3</sub> thin films</b> Belenchuk, A.(1), Shapoval, O.(1), Boris, Iu.(1,2), Palamarciuc, O.(1), Vatavu, E.(2), Dmitroglu, L.(1), Vatavu, S.*(1,3) 1) Physics of Semiconductors and Devices Lab, Faculty of Physics and Engineering, Moldova, Moldova State University, 60 A. Mateevici str., MD 2009, Chisinau, Moldova, (2) E. Pokatilov Laboratory of Physics and Engineering of Nanomaterials, Faculty of Physics and Engineering, Moldova State University, 60 A. Mateevici str., MD 2009, Chisinau, Moldova, (3) CaRISMA Research Center, Faculty of Physics and Engineering, Moldova State University, 60 A. Mateevici str., MD 2009, Chisinau, Moldova	N 7.11
16:00	<b>Elaboration of ZnMgO thin films by ultrasonic spray pyrolysis for optoelectronic applications using water-based solutions</b> Souav Bose, Christyves Chevallier, Sidi Ould Saad Hamady, Nicolas Fressengeas Université de Lorraine, CentraleSupélec, LMOPS, F-57000 Metz, France	N 7.3	16:00	<b>The effect of oxygen deficiency on zinc oxide thin films grown by pulsed electron beam deposition</b> M. Nistor 1, F. Gherendi 1 and J. Perrière 2,3 1 National Institute for Lasers, Plasma and Radiation Physics (NILPRP), L22, PO Box. MG-36, 077125 Bucharest-Magurele, Romania 2 Sorbonne Universités, UPMC Univ Paris 06, UMR 7588, INSP, F-75005, Paris, France, 3 CNRS, UMR 7588, INSP, F-75005, Paris, France	N 7.12
16:00	<b>Effect of DNA Aptamer Concentration on Conductivity of Water-gated Al:ZnO Thin Film Transistor</b> Andrejs Ogurcovs [1], Kevon Kadiwala [1], Eriks Sledevskis [2], Marina Krasovska [2], Ilona Plaksenkova [3] [1] Institute of Solid State Physics, University of Latvia, Kengaraga street 8, Riga, Latvia, LV-1063 [2] G. Liberts' Innovative Microscopy Centre, Department of Technology, Institute of Life Sciences and Technology, Daugavpils University, Parades Street 1, Daugavpils LV-5401, Latvia [3] Laboratory of Genomics and Biotechnology, Department of Biotechnology, Institute of Life Sciences and Technology, Daugavpils University, Parades Street 1A, Daugavpils, LV-5401, Latvia	N 7.4	16:00	<b>Development of Cathode Active Materials using CrIII-containing Vanadate Glass for Li-ion Battery</b> Saeko Matsuo (1), Shunsuke Matsusako (1), Yuma Morimoto (1), Ayaka Fukuchi (1), Hyuga Nakahara (1), Masakazu Haruta (1), Tetsuaki Nishida (2), Nobuto Oka (1) (1) Kindai University, Japan, (2) Environmental Materials Institute, Japan	N 7.13

**Experimental setup for Laser Induced Damage Threshold measurements of optical films**

G. P. Bleotu<sup>1,2,3</sup>, A. Naziru<sup>1,2</sup>, D. G. Matei<sup>1</sup>, S. Popa<sup>1</sup>, A. Dumitru<sup>1</sup>, C. Alexe<sup>1</sup>, V. Craciun<sup>4</sup>, R. Udrea<sup>2,4</sup>, S. A. Irimiciuc<sup>4</sup>, D. Craciun<sup>4</sup>, G. Dorcioman<sup>4</sup>, O. Uteza<sup>5</sup>, V. Craciun<sup>1,4</sup>, D. Ursescu<sup>1,2</sup>  
<sup>1</sup> &#8220;Horia Hulubei&#8221;, National Institute for R&D in Physics and Nuclear Engineering (IFIN-HH), ELI-NP, 077125 Bucharest-Magurele, Romania, Romania, <sup>2</sup> University of Bucharest, Faculty of Physics, 077125 Bucharest-Magurele, Romania, <sup>3</sup> LULI-CNRS, CEA, UPMC Univ Paris 06: Sorbonne Universite, Ecole Polytechnique, Institut Polytechnique de Paris, F-91128 Palaiseau, France, <sup>4</sup> National Institute for Laser, Plasma and Radiation Physics, 077125 Bucharest-Magurele, Romania. <sup>5</sup> LP3 Laboratory, University of Marseille, France

**Advanced oxide thin films I : Tanaka Hidekazu**

- 09:00 INV Circulating Manufacturing and Advanced Oxide Thin Films using Photo Reaction Process for Next Generation** N 8.1  
 Tetsuo Tsuchiya, T. Nakajima, I. Yamaguchi, J. Monoto, Y. Kitanaoka, Y. Uzawa  
 Advanced Manufacturing Research Institute, National Institute of Advanced Industrial Science and Technology (AIST)
- 09:30 Peculiar Magnetic Property of Superlattices and Multilayers Using both of Antiferromagnetic LaFeO<sub>3</sub> and CaFeO<sub>3</sub>.** N 8.2  
 Nobuyuki Iwata  
 College of Science & Technology, Nihon Univ., 7-24-1 Narashinodai, Funabashi-shi, Chiba 274-8501 Japan
- 09:45 Modification of Various Amorphous or Polycrystalline TCO films by the Strong Flash-lamp Irradiation** N 8.3  
 Makoto Kashiwagi<sup>(1),(2)</sup>, Kentaro Tanaka<sup>(1)</sup>, Simpei Iwasaki<sup>(1)</sup>, Takehiko Yokomori<sup>(3)</sup>, Yuki Oguchi<sup>(4)</sup>, Takuya Komoda<sup>(5)</sup>, \*Yuzo Shigesato<sup>(1)</sup>  
 (1) Graduate School of Science and Engineering, Aoyama Gakuin University, JAPAN, (2) PRESTO, Japan Science and Technology Agency, JAPAN, (3) Business Management Head Quarters, Ushio Inc., JAPAN, (4) Center for Instrumental Analysis, Aoyama Gakuin University, JAPAN, (5) Research Organization for Center of Innovation, Yamagata University, JAPAN
- 10:00 Semiconductor to metal transition in ZnO-based thin films and their nanocomposites: Effect of energetic ions** N 8.4  
 Himanshi Gupta<sup>\*1</sup>, Subodh K Gautam<sup>1,2</sup>, RG Singh<sup>3</sup>, Jitendra Singh<sup>1,4</sup>, Monika Tomar<sup>5</sup>, G. R. Umapathy<sup>1</sup>, S. Ojha<sup>1</sup>, Soumen Kar<sup>1</sup>, Fouran Singh<sup>1</sup>  
 1) Inter-University Accelerator Centre, Aruna Asaf Ali Marg, New Delhi - 110067, India. 2) Laboratory of Solid-State Physics (LPS), University of Paris-Sud, 91400 Orsay, France. 3) Department of Physics, Bhagini Nivedita College, University of Delhi, New Delhi -110043, India. 4) Department of Materials Science and Engineering, National Taiwan University of Science and Technology, Taipei 10607, Taiwan. 5) Miranda House College, University of Delhi, New Delhi - 110007, India.
- 10:15 An Experimental Comparison Study on the Cu<sub>2</sub>O thin films via different preparation techniques** N 8.5  
 Chithira Venugopalan Kartha, Dominique Muller, Stéphane Roques, Gérald Ferblantier, Abdelilah Slaoui, Thomas Fix  
 Icube Laboratory, Université de Strasbourg and CNRS, 23 rue du Loess, BP 20 CR, F-67037 Cedex 2 Strasbourg, France
- 10:30 Discussion**

**Advanced oxide thin films II : Tetsuo Tsuchiya**

- 10:45 INV High ionic conductivity at the interfaces of solid electrolytes and electrodes** N 9.1  
 Taro Hitosugi  
 The University of Tokyo
- 11:15 Substoichiometric Molybdenum trioxide as selective contacts for silicon solar cells** N 9.2  
 Salvatore La Manna<sup>1</sup>, Fiorella Tringali<sup>1</sup>, Giorgia Franzò<sup>2</sup>, Antonio Terrasi<sup>1</sup>, Maria Miritello<sup>2</sup>  
<sup>1</sup> University of Catania, Via S. Sofia, 64, I-95123 Catania, Italy, <sup>2</sup> CNR-IMM, Via S. Sofia, 64, I-95123 Catania, Italy
- 11:30 Ferroelectric properties of epitaxial Pb(Zr, Ti)O<sub>3</sub> transferred from SrTiO<sub>3</sub>(100) single crystal to flexible Cu/polyimide sheet** N 9.3  
 Hiroaki Nishikawa<sup>1</sup>, Tomofumi Mizuyama<sup>2</sup>  
<sup>1</sup> Faculty of Biology-Oriented Science and Technology, Kindai University <sup>2</sup> Graduate School of Biology-Oriented Science and Technology, Kindai University



11:30	<b>Growth of the Correlated Metal SrVO<sub>3</sub> by Molecular Beam Epitaxy</b> Lishai Shoham <sup>1</sup> , Maria Baskin <sup>1</sup> , Myung-Geun Han <sup>2</sup> , Yimei Zhu <sup>2</sup> , and Lior Korbblum <sup>1</sup> <sup>1</sup> Andrew and Erna Viterbi Department of Electrical and Computer Engineering, Technion—Israel Institute of Technology, <sup>2</sup> Condensed Matter Physics and Materials Science, Brookhaven National Laboratory,	N 12.5	15:30	<b>Sustainable electronic logic circuits with fully printed paper transistors</b> Inês Cunha <sup>1</sup> , Ana Rovisco <sup>1</sup> , Sofia Henriques Ferreira <sup>1</sup> , Jorge Martins <sup>1</sup> , Pydi Ganga Bahubalindruni <sup>2</sup> , José Tiago Carvalho <sup>1</sup> , Pedro Barquinha <sup>1</sup> , Elvira Fortunato <sup>1</sup> , Rodrigo Martins <sup>1</sup> and Luís Pereira <sup>1,3</sup> <sup>1</sup> - CENIMATI3N, Department of Materials Science, School of Science and Technology, NOVA University Lisbon and CEMOP/UNINOVA, Caparica, Portugal <sup>2</sup> - Indian Institute of Technology Goa, At Goa College of Engineering Campus, Farmagudi, Ponda-403401, Goa, India <sup>3</sup> - AlmaScience, Campus da Caparica, 2829-516 Caparica (Portugal)	N 13.7
11:45	<b>Giant thermoelectric tuning by epitaxial strain of p-type Sr-doped LaCrO<sub>3</sub> transparent thin films</b> D. Han <sup>1</sup> , R. Moalla <sup>1</sup> , I. Fina <sup>2</sup> , V.M. Giordano <sup>3</sup> , M. d'Esperonnat <sup>1</sup> , C. Botella <sup>1</sup> , G. Grenet <sup>1</sup> , R. Debord <sup>3</sup> , S. Pailhès <sup>3</sup> , G. Saint-Girons <sup>1</sup> , and R. Bachelet <sup>1,*</sup> <sup>1</sup> . INL - Institut des Nanotechnologies de Lyon, Univ. Lyon, Ecole Centrale de Lyon, CNRS, UMR5270, 69134 Ecully, France (* romain.bachelet@ec-lyon.fr) <sup>2</sup> . ICMAB - Institut de Ciencia de Materials de Barcelona, CSIC, Barcelona 08193, Spain <sup>3</sup> . ILM - Institut Lumière Matière, Université de Lyon, UCBL, CNRS, UMR 5306, 69622 Villeurbanne, France	N 12.6	15:45	<b>Discussion</b>	
12:00	<b>Lunch and Plenary</b>			<b>II : S. Mao, T. Yamamoto, V. Craciun</b>	
	<b>Transparent and conductive oxide films I : A Klein</b>		16:00	<b>Stabilization of the oxygen concentration in La<sub>0.3</sub>Sr<sub>0.7</sub>CoO<sub>3-δ</sub> thin films by LaAlO<sub>3</sub> capping layer</b> M. Kiaba, O. Caha, F. Abadizaman, A. Dubroka Department of Condensed Matter Physics, Faculty of Science, Masaryk University, Department of Condensed Matter Physics, Faculty of Science, Masaryk University, Department of Condensed Matter Physics, Faculty of Science, Masaryk University, Department of Condensed Matter Physics, Faculty of Science, Masaryk University	N 14.1
13:45	<b>Transparent and conductive indium-free Vanadates crystallized at reduced temperature on glass using a 2D nanosheet seed layer</b> A. Boileau <sup>(1)</sup> , S. Hurand <sup>(2)</sup> , F. Baudouin <sup>(3)</sup> , U. Lüders <sup>(1)</sup> , M. Dallochio <sup>(1)</sup> , B. Bérimi <sup>(4)</sup> , A. Cheikh <sup>(1)</sup> , A. David <sup>(1)</sup> , C. Labbé <sup>(5)</sup> , J. Cardin <sup>(5)</sup> , M. Guilloux-Viry <sup>(3)</sup> , W. Prellier <sup>(1)</sup> , Y. Dumont <sup>(4)</sup> , V. Demange <sup>(3)</sup> , A. Fouchet <sup>(1)*</sup> <sup>(1)</sup> NORMANDIE UNIV., ENSICAEN, UNICAEN, CNRS, CRISMAT, 14000 CAEN, France <sup>(2)</sup> Institut Pprime, UPR 3346 CNRS-Université de Poitiers-ENSMA, SP2MI, 86962 Futuroscope-Chasseneuil cedex, France <sup>(3)</sup> Université de Rennes, CNRS, ISCR – UMR 6226, ScanMAT – UMS 2001, Rennes F-35000, France <sup>(4)</sup> Groupe D'Etude de La Matière Condensée (GEMaC), Université Paris-Saclay, UVSQ, CNRS, 45 Av. des Etats-Unis, 78035, Versailles Cedex, France <sup>(5)</sup> CIMAP, Normandie Université, ENSICAEN, UNICAEN, CNRS UMR6252, CEA, 14000 Caen, France	N 13.1	16:00	<b>Gold-decorated manganese oxide-based electrocatalysts for the oxygen evolution reaction by a plasma-assisted route</b> Davide Barreca,a,* Chiara Maccato,a,b Alberto Gasparotto,a,b Lorenzo Bigiani,b Teresa Andreu,c,d Johan Verbeeck,e Cinzia Sada,f Evgeny Modin,g Oleg I. Lebedev,h Juan Ramón Morante.c,d a. CNR-ICMATE and INSTM, Department of Chemical Sciences, Padova University, 35131 Padova, Italy b. Department of Chemical Sciences, Padova University and INSTM, 35131 Padova, Italy c. Catalonia Institute for Energy Research - IREC, Sant Adrià de Besòs, 08930 Barcelona, Spain d. Universitat de Barcelona (UB), 08028 Barcelona, Spain e. EMAT and NANOLab Center of Excellence, University of Antwerp, 2020 Antwerpen, Belgium f. Department of Physics and Astronomy, Padova University and INSTM, 35131 Padova, Italy g. CIC nanoGUNE BRTA, 20018 Donostia - San Sebastian, Spain h. Laboratoire CRISMAT, UMR 6508 CNRS/ENSICAEN/UCBN, 14050 Caen Cedex 4, France	N 14.2
14:15	<b>Conduction analysis of IGZO memristor for flexible analog memristor-based neural networks</b> Guilherme Carvalho <sup>1</sup> , Asal Kiazadeh <sup>2</sup> , Maria Pereira <sup>2</sup> , Jonas Deuermeier <sup>2</sup> , Rodrigo Martins <sup>2</sup> Elvira Fortunato <sup>2</sup> and Vítor Tavares <sup>1</sup> <sup>1</sup> . Institute for Systems and Computer Engineering, Technology and Science (INESC TEC)-INESC Technology and Science and FEUP - Faculdade de Engenharia, Universidade do Porto, Campus da FEUP, Porto, Portugal <sup>2</sup> . CENIMATI3N, Department of Materials Science, School of Science and Technology, NOVA University Lisbon and CEMOP/UNINOVA, Caparica, Portugal guilherm3.c@gmail.com - a.kiazadeh@fct.unl.pt	N 13.2	16:00	<b>Chemical vapor deposition of nanoscale α-Mn<sub>3</sub>O<sub>4</sub> electrode materials for water splitting applications</b> Alberto Gasparotto,* a,b Chiara Maccato,* a,b Cinzia Sada,c Athanasia Petala,d Symeon Bebelis,d Dimitris I. Kondarides,d Davide Barreca.b a Department of Chemical Sciences, Padova University and INSTM, 35131 Padova, Italy, b CNR-ICMATE and INSTM, Department of Chemical Sciences, Padova University, 35131 Padova, Italy, c Department of Physics and Astronomy, Padova University and INSTM, 35131 Padova, Italy, d Department of Chemical Engineering, University of Patras, 26504 Patras, Greece.	N 14.3
14:30	<b>Towards p-type MBE-grown SrTi<sub>1-x</sub>AlxO<sub>3</sub> films for thermoelectric applications</b> M. d'Esperonnat <sup>1</sup> , C. Adessi <sup>2</sup> , C. Botella <sup>1</sup> , A. Lamirand <sup>1</sup> , B. Canut <sup>3</sup> , G. Saint-Girons <sup>1</sup> , R. Bachelet <sup>1</sup> <sup>1</sup> Institut des Nanotechnologies de Lyon, INL UMR5270 CNRS, Ecole Centrale de Lyon, 69134 Ecully, France, <sup>2</sup> Institut Lumière Matière, ILM UMR5306 CNRS, Univ. Lyon 1, 69622 Villeurbanne, France, <sup>3</sup> Institut des Nanotechnologies de Lyon, INL UMR5270 CNRS, INSA Lyon, 69621 Villeurbanne, France,	N 13.3	16:00	<b>Electric field-induced domain wall motion in spin spiral systems</b> Francesco Foggetti, Sergey Artyukhin Italian Institute of Technology, Italian Institute of Technology	N 14.4
14:45	<b>High-quality deposition of vanadium dioxide (VO<sub>2</sub>) films using magnetron sputtering</b> Eduard-Nicolae Sirjita <sup>12</sup> , Alexandre Boulle <sup>2</sup> , Richard Mayet <sup>2</sup> , Jean-Christophe Orlanges <sup>1</sup> , Aurelian Crunteanu <sup>1</sup> <sup>1</sup> . XLIM, UMR 7252 CNRS/Université de Limoges, 123 Av. Albert Thomas, 87060 Limoges, France, <sup>2</sup> . Institut de Recherche sur les Céramiques (IRCer), CNRS UMR 7315, Université de Limoges, Centre Européen de la Céramique, 12 rue Atlantis, Limoges, 87068, France	N 13.4	16:00	<b>Strain-induced metal-to-insulator transition in SrCrO<sub>3</sub> thin films</b> Simon Jöhr, Alberto Carta, Jonathan Spring, Anna Zakharova, Cinthia Piamonteze, Claude Ederer, Marta Gibert University of Zurich, Zurich, Switzerland, ETHZ, Zurich, Switzerland, University of Zurich, Zurich, Switzerland, Paul Scherrer Institute, Villigen, Switzerland, Paul Scherrer Institute, Villigen, Switzerland, ETHZ, Zurich, Switzerland, Technische Universität Wien, Wien, Austria,	N 14.5
15:00	<b>Mg-doped ZnO detectors for fast ultraviolet detection</b> Ščajev, P. *(1), Miasojedovas, A. (1), Mekys, A. (1), Mazuronyte, M. (1), Chang, L. (2), Chou M. M. C. (2) <sup>(1)</sup> Institute of Photonics and Nanotechnology, Vilnius University, Saulėtekio Ave. 3, LT 10257 Vilnius, Lithuania <sup>(2)</sup> Department of Materials and Optoelectronic Science, National Sun Yat-sen University, Kaohsiung 80424, Taiwan	N 13.5	16:00	<b>FeV<sub>2</sub>O<sub>4</sub> epitaxial thin films on MgO: properties and orbital ordering</b> Antonio Peña Corredor (a), Daniele Preziosi (a), Laurianne Wendling (a), François Roulland (a), Laurent Schlur (a), Nils Blanc (b), Stephane Grenier (c), Nathalie Viart (a), Christophe Lefevre (a) (a) - Institut de Physique et Chimie des Matériaux de Strasbourg. Strasbourg, France. (b) - European Synchrotron Radiation Facility. Grénoble, France. (c) - Institut Néel. Grénoble, France.	N 14.6
15:15	<b>Thin oxide films coating metallic nanowire networks: a promising nanocomposite for many applications</b> Daniel Bellet, Abdou Sekkat, Masoud Akbari, Chiara Crivello, Dorina T. Papanastasiou <sup>1</sup> Laetitia Bardet, Ambreen Ambreen, Camilo Sanchez, Matthieu Weber, Carmen Jiménez, David Muñoz-Rojas Univ. Grenoble Alpes, CNRS, Grenoble INP, LMGP, 38000 Grenoble, France	N 13.6	16:00	<b>Local conductivity of SrVO<sub>3</sub> perovskite thin film deposited on oxide nanosheets</b> R. Coq Germanicus <sup>1*</sup> , A. Boileau <sup>1</sup> , F. Baudouin <sup>2</sup> , V. Demange <sup>2</sup> , A. David <sup>1</sup> , M. Febvre <sup>3</sup> , U. Lüders <sup>1</sup> , W. Prellier <sup>1</sup> and A. Fouchet <sup>1</sup> <sup>1</sup> . NORMANDIE UNIV, ENSICAEN, UNICAEN, CNRS, CRISMAT, 14000 CAEN, France. <sup>2</sup> . Univ Rennes, CNRS, ISCR – UMR 6226, 35042 Rennes, France. <sup>3</sup> . Bruker Nano Surfaces, 112 Robin Hill Road, CA 93117, Santa Barbara, USA.	N 14.7

16:00	<b>An eco-friendly flexible system for piezoelectric application</b> M. Nasui1*, R. B. Sonher 1, T. Petrisor Jr.1, E. Ware2, M.S. Gabor, L. Ciontea 1, T. Petrisor1 1Centre for Superconductivity, Spintronics and Surface Science, Technical University of Cluj-Napoca, Str. Memorandumului, Nr. 28, 400114 Cluj-Napoca, Romania 2 Imperial College London, Exhibition Road, South Kensington, London SW 7 2AZ, United Kingdom	N 14.8
16:00	<b>Piezoelectric study of doped BCTZ thin films for ceramic transducer applications</b> Nazir Jaber, Jerome Wolfman, Fabien Giovannelli, Claire Bantignies, Bogdan Rosinski, Jean-Louis Longuet, Pascal Andreatza, Beatrice Negulescu N. Jaber1, J. Wolfman1, F. Giovannelli1, C. Bantignies2, B. Rosinski2, J-L. Longuet3, P. Andreatza4, B. Negulescu1 1 GREMAN, UMR7347 CNRS, Université de Tours, Parc de Grandmont, 37200 Tours, France 2 VERMON SA, 180 rue du Général Renault, 37038 Tours, France 3 CEA, DAM, Le Ripault, F-37260 Monts, France 4 ICMN, UMR 7374 CNRS, Université d'Orléans, 1b rue de la Férollerie, 45071 Orléans, France	N 14.9
16:00	<b>Interference of oxide nanoparticles with microbiota isolated Enterococcus sp strains</b> Holban, A.M.*(1,2), Grumezescu, A.M.(2,3), Capraru, P. (1), Asaftei, M.(1), Ditu, L.M.(1,2), Curutiu, C.(1,2), Puscas, N. (1), Lazar, V.(1) (1)Department of Microbiology and Immunology, Faculty of Biology, University of Bucharest (2)Research Institute of the University of Bucharest, Romania (3) Department of Science and Engineering of Oxide Materials and Nanomaterials, Faculty of Applied Chemistry and Materials Science, University Politehnica of Bucharest	N 14.10
16:00	<b>Synthesis of single crystal metal oxide nanoparticles by using microwaves vaporization of metal wires</b> Doina Craciun1, Petronela Garoi1, Marian Mogildea2, George Mogildea2, Bogdan S. Vasile3, Valentin Craciun1, 4 1National Institute for Laser, Plasma and Radiation Physic, Laser Department, 409 Atomistilor St., PO Box Magurele, Romania, 2Institute for Space Science, 077125, Magurele, Romania, 3University «POLITEHNICA» from Bucharest, Faculty of Applied Chemistry and Material Science, Department of Science and Engineering of Oxide Materials and Nanomaterials, Bucharest, Romania, 4Extreme Light Infrastructure for Nuclear Physics, ELI-NP, IFIN-HH, Magurele, Romania	N 14.11
16:00	<b>Preparation of ZnO based structures by hydrothermal method for detector and highpower electronics applications</b> Raevschi, S. (1), Gorceac, L. (1), Botnariuc, V.(1), Chetruș, P.I.(1), Gaugas, P.(1), Chetruș, P.M.(1), Vatavu, S.*(1) (1) Physics of Semiconductors and Devices Lab, Faculty of Physics and Engineering, Moldova State University, 60 A. Mateevici str., MD 2009, Chisinau, Moldova	N 14.12
16:00	<b>Nb-doped TiO2 anatase as a metallic buffer for lattice-mismatched complex oxide heterostructures</b> Belenchuk, A.(1,2), Shapoval, O.(1,2), Dehning, A.(3), Flathmann, C.(4), Vatavu, S.*(1), Moshnyga, V.(2), M. Seibt(4) and Jooss, C.(3) (1) Physics of Semiconductors and Devices Lab, Faculty of Physics and Engineering, Moldova State University, 60 A. Mateevici str., MD 2009, Chisinau, Moldova, (2) Erstes Physikalisches Institut, Georg-August-Universität Göttingen, Friedrich-Hund Platz 1, 37077 Göttingen, Germany, (3) Institut für Materialphysik, Georg-August-Universität Göttingen, Friedrich-Hund Platz 1, 37077 Göttingen, Germany, (4) Viertes Physikalisches Institut, Georg-August-Universität Göttingen, Friedrich-Hund Platz 1, 37077 Göttingen, Germany	N 14.13
16:00	<b>Development of Air-Electrode Catalyst using Coll,III-containing Vanadate Glass for Rechargeable Metal-Air Battery</b> Saeko Matsuo (1), Takahisa Sakuragi (1), Hyuga Nakahara (1), Ayaka Fukuchi (1), Yuma Morimoto (1), Masayoshi Yuasa (1), Tetsuaki Nishida (2), Nobuto Oka (1) (1) Kindai University, Japan, (2) Environmental Materials Institute, Japan	N 14.14

Friday june 3

Transparent and conductive oxide films II : FOUCHET Arnaud

09:00	<b>INV Solution-based Metal Oxides: A Demand to Scale-up Electronic Devices from Lab to Fab</b> Emanuel Carlos1, Rita Branquinho1, Asal Kiazadeh1, Jonas Deuermeier1, Rodrigo Martins1 and Elvira Fortunato1 1. i3N/CENIMAT, Department of Materials Science, Faculty of Sciences and Technology, Universidade NOVA de Lisboa and CEMOP/UNINOVA, Campus de Caparica, 2829-516 Caparica, Portugal	N 15.1
09:30	<b>Growth and Characterizations of Zinc Tin Oxynitride Thin Films</b> Naomi Yamada,1) Kenta Mtsuura,1) Mari Mizutani,1) Shunichiro Yata,1) Masataka Imura,2) Hidenobu Murata,3) Junjun Jia,4) Fumio Kawamura5) 1) Department of Chemistry, Chubu University, 2) Next-Generation Semiconductor Group, National Institute for Materials Science (NIMS), 3) Department of Materials Science, Osaka Prefecture University, Global Center for Science and Engineering, Waseda University, High Pressure group, National Institute for Materials Science (NIMS)	N 15.2
09:45	<b>High-mobility In2O3-based transparent conducting films fabricated by solid-phase crystallization</b> Takashi Koida, Junichi Nomoto Research Institute for Energy Conservation, National Institute of Advanced Industrial Science and Technology (AIST), 1-1-1, Umezono, Tsukuba, 305-8568, Japan, Advanced Manufacturing Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), 1-1-1, Higashi, Tsukuba, Ibaraki 305-8565, Japan	N 15.3
10:00	<b>Oxidation process investigations during pulsed laser deposition of TCO semiconductors</b> Stefan Andrei Irimiciuc(1,2), Sergii Chertopalov(2), Michal Novotný(2), Valentin Craciun(1,3), Jan Lancok(2) 1National Institute for Laser, Plasma and Radiation Physics – NILPRP, 409 Atomistilor Street, Bucharest, Romania 2Institute of Physics of the Czech Academy of Sciences, Na Slovance 1999/2, Prague, Czech Republic 3Extreme Light Infrastructure for Nuclear Physics, IFIN-HH, Magurele, Romania	N 15.4
10:15	<b>Observation of room-temperature cavity-polaritons in ZnO microcavities fabricated by a top-down process</b> Kohei Shima, Kentaro Furusawa, and Shigefusa F. Chichibu Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, Sendai 980-8577, Japan	N 15.5
10:30	<b>Discussion</b>	
<b>Ferroelectric thin films III : FOUCHET Arnaud</b>		
10:45	<b>INV Homogeneous versus non-homogeneous switching in ferroelectrics: can charge injection trigger the switching?</b> L. Pintilie National Institute of Materials Physics	N 16.1
11:15	<b>Magnetic phase and magneto-resistive effects in vanadium oxide epitaxial nanoclusters</b> Brice Kengni Zanguim*, Loïc Joly*, Fabrice Scheurer*, Philippe Ohresser*, Jean-François Dayen*, Corinne Ulhaq-Bouillet*, Joseph Uzan*, Bohdan Kundys*, Hicham Majjad*, and David Halley* * Université de Strasbourg, CNRS, Institut de Physique et Chimie des Matériaux de Strasbourg, UMR 7504, F-67000 Strasbourg, France ^ Synchrotron SOLEIL, L'Orme des Merisiers, Saint-Aubin, BP 48, F-91192 Gif-sur-Yvette, France	N 16.2
11:30	<b>Steep-slope Negative Capacitance Field Effect Transistors with Solution Combustion-Derived Hf0.5Zr0.5O2 ferroelectrics</b> Pavan Pujar *(1), Haewon Cho (1), Sunkook Kim (1) (1) Multifunctional Nano Bio Electronics Lab, School of Advanced Materials Science and Engineering, Sungkyunkwan University, Suwon, Gyeonggi-do 16419, South Korea.	N 16.3
11:45	<b>Ferroelectric Phase Formation in Hf0.5Zr0.5O2 using Dual-step PLD Growth for Negative Capacitance Field-Effect Transistors</b> Haewon Cho*(1), Pavan Pujar(1), Sunkook Kim(1) (1) Multifunctional Nano Bio Electronics Lab, School of Advanced Materials Science and Engineering, Sungkyunkwan University, Gyeonggi-do, Suwon 16419, South Korea.	N 16.4



12:00

**Low power magnetization manipulation for spintronics : spin Hall magnetoresistance in multiferroic oxide-based heterostructures**

N 16.5

Suvidyakumar Homkar, Elodie Martin, Benjamin Meunier, Alberto Anadon-Barcelona, Corinne Bouillet, Jon Gorchon, Karine Dumesnil, Christophe Lefèvre, François Roulland, Olivier Copie, Daniele Preziosi, Sébastien Petit-Watelot, Juan-Carlos Rojas-Sánchez, and Nathalie Viart  
Université de Strasbourg, CNRS, IPCMS, UMR 7504, F-67000 Strasbourg, France ,  
Université de Lorraine, CNRS, IJL, F-54000 Nancy, France

12:15

**Discussion and Closing**