

## Poster Session: Wednesday, September 6<sup>th</sup>, 2017 – 16:30-18:30h.

We-S55-P-01

Preparation, characteristics and temperature as well as frequency dependence dielectric and complex impedance spectroscopic studies on composite multiferroic of  $\text{PbTiO}_3 - \text{SrFe}_{12}\text{O}_{19}$

Krishan Kumar Bamzai

We-S55-P-02

Diisopropylammonium halides – new family of lead-free ferroelectric materials

Anna Piecha-Bisiorek, Ryszard Jakubas

We-S55-P-03

Order-disorder phenomenon in a ferroelectric Jahn-Teller phase transition

Jiri Hlinka

We-S55-P-04

Flexible crystals of perovskite-like coordination polymers with tunable and switchable organic guests

Magdalena Rok, Grazyna Bator

We-S55-P-05

We-S55-P-06

On the influence of the synthesis temperature on the fluorescence dependence of doped PVDF/Er films

Evaristo Falcao, Glauciane Leite, Eriton Botero, Ruyan Guo, Amar Bhalla

We-S55-P-07

Improvements of the PVDF fluorescence spectrum caused by Nd and Ce addition

Evaristo Falcao, Lais Aguiar, Eriton Botero, Claudio Carvalho, Ruyan Guo, Amar Bhalla

We-S55-P-08

Study of the phase transition in PLZT samples by the Interferometric Method

Evaristo Falcao, Ivair Santos, Jose Pereira, Alysso Steimacher, Antonio Medina, Mauro Baesso, Jose Eiras, Garcia Ducinei, Ruyan Guo, Amar Bhalla

We-S55-P-09

Temperature dependent magnetoelectric and magnetodielectric response of multiferroic cobalt ferrite and  $\text{Pb}(\text{Zr}, \text{Ti})\text{O}_3$  multilayered structure

Brandon Young

We-S55-P-10

Upconversion in co-doped SBN for supercontinuum light generation

Moumita Dutta, Michael Williams, Rohit Prasankumar, Amar Bhalla, Ruyan Guo

Structure and properties of  $\text{Pb}(\text{Mg}_{1/4}\text{Nb}_{1/2}\text{Ti}_{1/4})\text{O}_3$  nanodots from first principles

Abdullah Albarakati, Sergey Prosandeev, Dawei Wang, Laurent Bellaiche

We-S55-P-12

Physical, electrical and magnetic properties of ferrite modified PZT-based composite ceramics

Jiradtakeat Dechawuttikul, Anurak Prasathetragarn, Pongsakorn Jantaratana, Rattikorn Yimnirun

We-S55-P-13

Study on dielectric and magnetic properties of the organic-inorganic hybrid layered structure halide material

Yonghwan Kim, namjung hur

We-S55-P-14

Environmental friendly  $\text{SrTi}_{1-x}\text{Mo}_x\text{O}_3:15\text{Nb}$  perovskites for high temperature thermoelectric applications

Mandvi Saxena, Ritwik Banerjee, Tanmoy Maiti

We-S55-P-15

Relaxor ferroelectric  $\text{Ba}_x\text{Sr}_{2-x}\text{TiCoO}_6$  double perovskite material for high temperature thermoelectric application

Nirma Kumari, Mandvi Saxena, Pinku Roy, Tanmoy Maiti

Plasmonics and Perovskites Laboratory, Department of Materials Science and Engineering, Indian Institute of Technology Kanpur, Uttar

We-S55-P-16

Metal-like electrical conductivity in double perovskite  $\text{A}_x\text{Sr}_{2-x}\text{TiMoO}_6$  (A = La, Ba) oxides for high temperature thermoelectric power generation

Mandvi Saxena, Tanmoy Maiti

Plasmonics and Perovskites Laboratory, Department of Materials Science and Engineering, Indian Institute of Technology Kanpur, Uttar

We-S55-P-17

Gamma-ray irradiation effects on the ferroelectric domain structure of epitaxial  $\text{Pb}(\text{Zr}_{0.52}\text{Ti}_{0.48})\text{O}_3$  thin films

Sang Don Bu, Sam Yeon Cho, Eun Young Kim

We-S55-P-18

Ferroelectric-based synapse devices with oxide heterostructure

Joonbong Lee, Hojin Lee, Yeogyun Yoon, Youjung Gill, Yunseok Kim, Taekjib Choi

We-S55-P-19

Enhanced thermoelectric figure of merit in environment friendly nanocomposite of  $\text{SrTi}_{0.85}\text{Nb}_{0.15}\text{O}_3$  and graphene oxide for clean energy generation

Tanmoy Maiti, Pinku Roy, Farheen Anjum

We-S55-P-20

Synthesis of orthorhombic  $\text{SnO}_2$  and effect of the cerium doping on the structural properties

Ernesto Pereira, Maria Helena Costa, Adilson de Oliveira

We-S55-P-21

Spectral insights of newly synthesized environmentally benign bismuth based lead free organic inorganic hybrid perovskite solar cell

Tanmoy Maiti, Pritam Dey, Harish Singh, Shubham Gautam

We-S55-P-22

Colossal change in thermopower with temperature driven p-n type conduction switching in La and Ca doped  $\text{Sr}_2\text{TiFeO}_6$  double perovskites

Tanmoy Maiti, Pinku Roy

We-S55-P-23

Ambient processing of P(VDF-TrFE)-based thin-film capacitors

Hamed Sharifi Dehsari, Jasper Michels, Kamal Asadi

We-S55-P-24

Ferroelectric response of phase pure PMN-PT thin films realized through pulsed laser deposition

Pius Augustine, Martando Rath, M.S. Ramachandra Rao<sup>2</sup>

We-S55-P-25

Highly resistive fast-sintered  $\text{BiFeO}_3$  multiferroic magnetoelectric ceramics Gustavo S. Dias, Luiz F. Cótica, Ivair A. Santos, Valdirlei F. Freitas, Fabiano Yokaichiya

We-S55-P-26

Dielectric and ferroelectric properties of  $(1-(x/2))\text{BaTiO}_3-(1-(x/2))\text{BiFeO}_3-x\text{LaFeO}_3$  ceramics synthesized via solid-state reaction method with NaCl salt as the surface active agent.

Narit Triamnak, Kunyarat Aryuyuen, Kiratiporn Boonkham, Chanatorn Patadoung

We-S55-P-27

Physical characterizations of the high-bioactive PVDF-HAp ferroelectric composite

Valdirlei Freitas, Taiana Bonadio, Jaciele Rosso, Gustavo Dias, Luiz Cótica, Ivair Santos, Ludmilla Silva

We-S55-P-28

Effect of Nb doping in  $\text{BaSrZrTiO}_3$

Anju Dixit

We-S55-P-29

Rapid detection of transient currents in ferroelectric nanocapacitors via Bayesian Inference

Suhas Somnath, Kody Law, Anna Morozovska, Petro Maksymovych, Yunseok Kim, Xiaoli Lu, Marin Alexe, Richard Archibald<sup>2</sup>, Sergei Kalinin, Stephen Jesse, Rama Vasudevan

We-S55-P-30

Long-wave optic phonons in  $\text{PbNi}_{1/3}\text{Nb}_{2/3}\text{O}_3$  crystals.

Alexander Fedoseev, Tatyana Smirnova, Sergey Lushnikov, Ram Katiyar

We-S55-P-31

Investigation on a giant magnetoelectric effect in a hexaferrite via neutron scattering techniques

Yan Wu, Huibo Cao, Young Sun

We-S55-P-32

Synthesis and characterization of the perovskite compound  $\text{YFe}_x\text{Cr}_{1-x}\text{O}_3$  ( $0 < x < 1$ )

- Roberto Salazar, Friedrich E. Wagner, Antonio Lazo, Rubén Puga, Juan Z. Dávalos, Américo Orcohuanca, Héctor Loro  
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Inorganic ferroelectric/dielectric nanocomposite thin films  
Yomery Espinal, Brendan Hanrahan, Pamir Alpay
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Domain wall conductivity with a twist  
Rama Vasudevan, Ye Cao, Nouamane Laanait, Anton Ievlev, Linglong Li, Jan-Chi Yang, Ying-Hao Chu, Long-Qing Chen, Sergei Kalinin, Petro Maksymovych  
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Is ferroelastic BiVO<sub>4</sub> also antiferroelectric?  
Nidal Banja, Hongjian Zhao, Jorge Iniguez, Mael Guennou  
We-S55-P-36  
Preparation, characterization and dielectric properties of Mg-doped CaCu<sub>3</sub>Ti<sub>4</sub>O<sub>12</sub> ceramics  
Eduardo Antonelli, Leonardo Arruda  
We-S55-P-37  
Refractive indices and birefringence of lithium niobate as a function of temperature and wavelength  
Abdallah Albarakaty, Nasser Moustafa  
We-S55-P-38  
Molten salt synthesized La<sub>1-x</sub>Sr<sub>x</sub>CoO<sub>3</sub> as an efficient electrocatalyst for water splitting  
Yuanbing Mao, Swati Mohan  
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Structural analysis and thermoelectric properties of La-doped Sr<sub>2</sub>CoMoO<sub>6</sub> double perovskites  
Tanmoy Maiti, Khagesh Tanwar  
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Sensing magnetic fields with an innovative smart probe composed by piezoelectric elements  
José R D Pereira, Fernando J Gaiotto, Rogerio G Nespola, Diogo Z Montanher, Ivair A Santos  
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Phase transitions studies in (1-x)(Ba<sub>0.77</sub>Ca<sub>0.23</sub>)TiO<sub>3</sub>-xBa(Ti<sub>0.75</sub>Zr<sub>0.15</sub>)O<sub>3</sub> ceramics  
Eduardo Antonelli, Renato Boschilia, Rangel Aredes, Andre Boaventura  
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Magnetoelectric properties of epitaxial Sr<sub>0.5</sub>Ba<sub>0.5</sub>MnO<sub>3</sub> films  
Temujin Bayaraa, Yurong Yang, Jorge Iniguez, Laurent Bellaiche  
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Induced Magnetic-anisotropy by the remanent electric polarization of PMN-PT/CoFe<sub>2</sub>O<sub>4</sub> multiferroics particulates composites  
Korllvary R.C. Parra-Jimenez, Fábio L. Zabotto, Ducinei Garcia, Adilson J. A. de Oliveira  
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Gradient-lead-excess crystallization process: A way to produce highly textured (111) PZT films  
Alexander Sigov, Lyubov Delimova, Elena Guschina, Nina Zaitseva, Dmitry Seregin, Konstantin Vorotilov  
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Dielectric polarization in BaSrTiO<sub>3</sub> films modulated by THz electric field  
Mikhail Agranat, Elena Mishina, Alexander Sigov  
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Estimation of dead layer at the PZT - Pt interface  
Alexander Sigov, Yury Podgorny, Pavel Lavrov, Konstantin Vorotilov  
We-S55-P-47  
Effect of the rare earth ion substitution on structural, dielectric and magnetic properties of perovskite Re<sub>2</sub>Bi<sub>2</sub>Fe<sub>4</sub>O<sub>12</sub> (Re = Eu, Sm, La) ceramics  
Javier Alonso Cuervo Farfán, Diego Seiti Fukano Viana, Flávio Paulo Milton, Ducinei Garcia, David Arsenio Landínez Téllez, Jairo Roa Rojas  
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NSMM Review – Part I: Scorecard of NSMM versus Goldschmidt’s Factor formalism  
Vignaswaran K. Veerapandiyar, YuHsun Liao, Walter A. Schulze, Scott T. Mixture, Steven M. Pilgrim, Steven C. Tidrow
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Ferroelectric property in nano-layered Hafnium oxide  
Sita Dugu, Shojan Pavunny, Rajesh Katiyar, Ram S Katiyar  
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Dielectric behavior of functional Paint/PMN-PT nanocomposite films  
Ashok Batra, Bir Bohara, Mohan Aggarwal, Ravi Lal  
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Investigation on the structural, dielectric, ferroelectric, and magnetic properties of BNTFCO ceramics  
Margarita Correa, Claudia Zuluaga, Ram Katiyar  
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NSMM Review – Part III: Pm3m coordination and temperature dependent radii  
YuHsun Liao, Vignaswaran K. Veerapandiyar, Walter A. Schulze, Scott T. Mixture, Steven M. Pilgrim, Steven C. Tidrow  
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NSMM Review – Part IV: coordination and temperature dependent polarizabilities  
Vignaswaran K. Veerapandiyar, YuHsun Liao, Walter A. Schulze, Scott T. Mixture, Steven M. Pilgrim, Steven C. Tidrow
- We-S55-P-54  
Growth and characteristics of the CH<sub>3</sub>NH<sub>3</sub>PbBr<sub>3</sub> perovskite crystal for optoelectronic applications  
Raja Surabhi, Ashok Batra, Kamala Bhat, Samuel Uba, Ashwith Chilvery  
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NSMM Review – Part V: Polarization and volume induced structural phase transitions  
Vignaswaran K. Veerapandiyar, YuHsun Liao, Walter A. Schulze, Scott T. Mixture, Steven M. Pilgrim, Steven Tidrow  
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NSMM Review – Part VI: Clausius – Mossotti relation incorporates Curie and Curie – Weiss laws  
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First principles studies in Bi<sub>1-x</sub>Nd<sub>x</sub>FeO<sub>3</sub> compositions  
Gabriel H. Perin, Gustavo S. Dia, Ivair A. Santos, Ruyan Guo, Amar Bhalla, Jose E. Padilha, Luiz F. Cotica  
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Probing the pore structure of a chiral periodic mesoporous organosilica using liquid crystals  
Jayalakshmi vallamkonda, P. Lemieux Robert  
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Meso-kinetics of one time relaxation electrical processes in BaTiO<sub>3</sub> ceramics - Boltzmann-Poisson model  
Vojislav V.Mitić, Zoran B.Vosika, Goran Lazović, Vesna Paunović, Ljubiša Kocić  
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Preparation and characterization of PAN-EC-PC-TPAI-I<sub>2</sub> gel polymer electrolytes for dye-sensitized solar cells  
Faisal Chowdhury  
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On the „inverted” phase transitions in ferroic crystals containing propylenediammonium cations  
Janusz Przesławski, Matthew Crofton, Zbigniew Czaplá  
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The effect of fluorine doping on structural and dielectric properties of Diisopropylammonium bromide  
Thirmal Chinthakuntla, Ratnamala Chatterjee, Simant Srivastav, Murugavel Pattukannu, Atalbihari Swain, Divyanshu Bhatnagar  
We-S55-P-64  
Dielectric and impedance spectroscopic studies of pristine and lanthanum substituted YBiO<sub>3</sub>  
Divyanshu Bhatnagar, Thirmal Chinthakuntla, Ratnamala Chatterjee  
Magnetics and Advanced Ceramics Laboratory, Physics Department, Indian Institute of Technology Delhi, New Delhi, India

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Investigation of ferroelectric properties by using Monte Carlo simulations  
Se-Hun Kim  
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Multiple bandgaps of ferroelectric based two-dimensional phononic crystals slab with Archmedes and Fibonacci spiral holes  
Amirullah Mamedov, Selami Palaz, Oral Oltulu, Ekmel Ozbay  
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Electronic band structure and optical properties of  $Gd_2(MoO_4)_3$ : First Principle calculations  
Amirullah Mamedov, Sevket Simsek, Gokay Ugur, Sule Ugur, Ekmel Ozbay  
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Tanmoy Maiti, Ritwik Banerjee  
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Structural and electrical properties of charge compensated dipole pairs substituted barium titanate  
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First Principles study of piezoelectric properties and morphotropic phase boundary of  $AgNbO_3$ -based solid solutions  
Sittichain Pramchu, Atchara Jaroenjittichai, Yongyut Laosiritaworn  
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Thickness dependence of dynamic phase diagram in ferroelectric films: Monte Carlo and Neural Network investigation  
Wimalin Laosiritaworn, Yongyut Laosiritaworn  
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Low-frequency noise characteristics of  $CuInP_2S_6$  lamellar crystal  
Andrius Dziugys, Ilona Zamaraitė  
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Effects of  $MnO_2$  doping on the electrical properties of 0.99BCZT-0.01Seeds ceramic systems  
Piewpan Parjansri, Sukum Eitssayeam  
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Sreco Skapin, Amalija Golobic, Danilo Suvorov  
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Sintering behavior, phase structure and electric properties of KNNTS-BKNZ ceramics with excessive alkali metals  
Rui Nie, Xing Xing, Jiagang Wu, Qiang Chen, Wen Zhang, Jianguo Zhu, Dinguan Xiao  
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Dielectric, Electrical Conduction, Piezoelectric and Impedance Analysis of  $Bi_3TiNbO_9$  Piezoceramics with Ce-Modifications  
Jing Yuan, Rui Nie, Jianguo Zhu  
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Stress dependence of structure, electronic and optical properties of  $BaTiO_3$  from WC, VdW-DF-C09 and HSE Functional calculations  
Eleicer Ching-Prado  
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Enhanced performance in AZO based transparent flexible TFTs due to oxygen vacancy in ZnO film with Zn-Al-O interface fabricated by atomic layer deposition  
Yang Li, Huanhuan Wang, Jinzhu Wuand, Xiaohong Wu  
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Anomalous dielectric behaviour in  $Cr^{3+}$  substituted  $Ba_{0.90}Sr_{0.10}TiO_3$  ferroelectric ceramics  
Parveen Kumar, Chandra Prakash, K.K. Raina  
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Dielectric properties of HHTP-4H<sub>2</sub>O cold pressed pellets  
Sergejus Balčiūnas, Anna Peterson, Maksim Ivanov, Jasper Adamson, Jūras Banys  
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Dielectric and structural properties of PVDF- $NaNbO_3$ - based cold sintered composites  
Deepankar S. Gyan, Parth Sharma, Yash Tamrakar, Akansha Dwivedi

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Electrocaloric effects in the lead-free  $Ba(Zr,Ti)O_3$  relaxor ferroelectric from atomistic simulations  
Zhijun Jiang, Sergei Prokhorenko, Sergey Prosandeev, Yousra Nahas, Dawei Wang, Jorge Íñiguez, Emmanuel Defay, Laurent Bellaiche  
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Direct imaging of the effect of screening of ferroic domains by means of UHV PFM  
Cecile Saguy, Maya Barzilay, Itamar Holzman, Asaf Hershkovitz, Yachin Ivry