

# PUBLICATIONS 2015 - OXYDES FERROÉLECTRIQUES

H Kaddoussi, A Lahmar, Y Gagou, JL Dellis, H Khemakhem, M El Marssi

*Electro-caloric effect in lead-free ferroelectric  $Ba_{1-x}Ca_x(Zr_{0.1}Ti_{0.9})_{0.925}Sn_{0.075}O_3$  ceramics*

**Ceramics International** 41 (10), 15103-15110 (2015)

A Lahmar, M Es-Souni,

*Sequence of structural transitions in  $BiFeO_3-RMnO_3$  thin films (R= Rare earth)*

**Ceramics International** 41 (4), 5721-5726 (2015).

'Sique  
ensée

## LABORATOIRE DE PHYSIQUE DE LA MATIÈRE CONDENSÉE

H. Kaddoussi, Y. Gagou, A. Lahmar, J. Belhadi, B. Allouche, J-L Dellis, M. Courty, H. Khemakhem, M. El Marssi

*Room temperature electro-caloric effect in lead-free  $Ba(Zr_{0.1}Ti_{0.9})_{1-x}Sn_xO_3$  ( $x=0$ ,  $x=0.075$ ) ceramics*

**Solid State Communications** 201, 64-67 (2015)

B. Asbani, J.-L. Dellis, A. Lahmar, M. Courty, M. Amjoud, Y. Gagou, K. Djellab, D. Mezzane, Z. Kutnjak, M. E I Marssi

*Lead-free  $Ba_{0.8}Ca_{0.2}(Zr_xTi_{1-x})O_3$  ceramics with large electrocaloric effect*

**Applied Physics Letters** 106 (4), 042902 (2015)

L. Baudry, I. A. Luk'yanchuk, A. Razumnaya  
*Dynamics of Field Induced Polarization Reversal in Strained Perovskite Ferroelectric Films with c-oriented polarization*

**Phys. Rev. B** 91, 144110 (2015)

I. Lukyanchuk, V. M. Vinokur, A. Rydh, R. Xie, M. Miloševi, U. Welp, M. Zach, Z. L. Xiao, G. W. Crabtree, S. Bending, F. Peeters, and W. K. Kwok  
*Rayleigh instability of confined vortex droplets in critical superconductors*

**Nature Phys.** 11, 21 (2015)

A. G. Razumnaya, Yu. A. Tikhonov, Yu. I. Yuzyuk, I. N. Zakharchenko, V. I. Torgashev, N. Ortega, A. Kumar, R. S. Katiyar, M. El Marssi and I. A. Lukyanchuk  
*Coexistence of the soft mode and sub THz central peak in ferroelectric  $BaTiO_3/(Ba,Sr)TiO_3$  superlattices*

**Superlattices and Microstructures**, 87, 19 (2015)

H. Abdelsalam, T. Espinosa-Ortega, I. Lukyanchuk  
*Tuning of Zero Energy States in Quantum Dots of Silicene and Bilayer Graphene by Electric Field*

**Superlattices and Microstructures** Volume 87, November 2015, Pages 137–142(2015)

P.-W. Martelli, S. Mefire, I. Luk'yanchuk  
*Multidomain switching in the ferroelectric nanodots*

**Europhys. Lett.** 111, 50001 (2015)

A. Gallegos-Melgar, D.G. Espinosa-Arbelaez, F. J. Flores-Ruiz, A. Lahmar, J-L Dellis, N. Lemée, F.J. Espinoza-Beltran, J. Muñoz-Saldaña

*Ferroelectric Properties of Manganese Doped  $(Bi_{1/2}Na_{1/2})TiO_3$  and  $(Bi_{1/2}Na_{1/2})TiO_3-BaTiO_3$  Epitaxial*

*Thin film*

**Applied Surface Science**, 359, 923 (2015)

N. Lemee, I. C. Infante, Cecile Hubault, A. Boulle, N. Blanc, N. Boudet, V. Demange and M. G. Karkut  
*Polarization Rotation in Ferroelectric Tricolor  $PbTiO_3/SrTiO_3/PbZr_{0.2}Ti_{0.8}O_3$  Superlattices*  
ACS Appl. Mater. Interfaces 7, 19906 (2015)

N. Jaber, J. Wolfman, C. Daumont, B. Négulescu, A. Ruyter, G. Feuillard, M. Bavencoffe, J. Fortineau, T. Sauvage, B. Courtois, H. Bouyanif, J. L. Longuet, C. Autret-Lambert and F. Gervais  
*Enhancement of piezoelectric response in Ga doped  $BiFeO_3$  epitaxial thin films*  
Journal of Applied Physics 117 (24), 244107

Y. González-Abreu, A. Peláiz-Barranco, Y. Gagou, J. Belhadi, P. Saint-Grégoire  
*Vibrational analysis on two-layer Aurivillius phase  $Sr_{1-x}Ba_xBi_2Nb_2O_9$  using Raman spectroscopy*  
Vibrational Spectroscopy 77, 1-4 (2015)

H. Kaddoussi, A. Lahmar, Y. Gagou, J.-L. Dellis, H. Khemakhem, M. El Marssi  
*Electro-caloric effect in lead-free ferroelectric  $Ba_{1-x}Ca_x(Zr_{0.1}Ti_{0.9})_{0.925}Sn_{0.075}O_3$  ceramic*  
Ceramics International, 41, Issue 10, Part B, 15103-15110 (2015)

Yu.A. Tikhonov, A.G. Razumnaya, V.I. Torgashev, I.N. Zakharchenko, Yu. I. Yuzyuk, M. El Marssi, N. Ortega, A. Kumar, and R. S. Katiyar  
*Emergence of the sub THz central peak at phase transitions in artificial  $BaTiO_3/(Ba,Sr)TiO_3$  superlattices*  
Physica Status Solidi (RRL)- Rapid Research Letters 9, 68 (2015)

SM Salim, A. Lahmar, H Zayed, AM Salem, GB Sakr, N Teleb, M. El Marssi  
*Structural characterization and optical properties of pulsed laser deposition of  $Se_{75}Te_{25}$  and  $Se_{75}Te_{17}Ge_8$  amorphous thin films*  
Materials Science in Semiconductor Processing 39, 172-177 (2015)

M. El Hadri, A. Achahbar, J. El Khamkhami, B. Khelifa, C. Tran Le Tuyet, V. Faivre, O. Abbas, M. El Marssi, F. Bougrioua, S. Bresson  
*Vibrational behaviour of Gelucire 50/13 by Raman and IR spectroscopies: A focus on the 1800 - 1000 cm<sup>-1</sup> spectral range according to temperature and degree of hydration*  
Journal of Molecular Structure, 1083, 441 (2015)

L. Kurpaska, J. Favergeon, L. Lahoche, M. El-Marssi, J.-L. Grosseau Poussard, G. Moulin, J.-M. Roelandt  
*Raman spectroscopy analysis of air grown oxide scale developed on pure zirconium substrate*  
Journal of Nuclear Materials 466, 460-467 (2015)

AG Razumnaya, Yu A Tikhonov, Yu I Yuzyuk, IN Zakharchenko, VI Torgashev, N Ortega, A Kumar, RS Katiyar, M. El Marssi, IA Lukyanchuk  
*Coexistence of the soft mode and sub-THz central peak in ferroelectric  $BaTiO_3/(Ba, Sr)TiO_3$  superlattices*  
Superlattices and Microstructures 87, 19-24 (2015)

H. Bouyanif, A.M. Salah, M. Zaghouani, M. El Marssi  
*High-temperature lattice-dynamics evolution of  $YMnO_3$  and  $YbMnO_3$*   
Physical Review B 91, 224104 (2015)

A. G. Razumnaya, Yu. I. Golovko, N. V. Lyanguzov, Yu. I. Yuzyuk, V. B. Shirokov, V. M. Mukhortov,  
and M. El Marssi  
*Ferroelectric Superlattice Based on Barium–Strontium Titanate Solid Solutions*  
Physics of the Solid State, 57, 2246-2251 (2015)

S. Anokhin, Yu. I. Yuzyuk, N.V. Lyanguzov, A.G. Razumnaya, D.V. Stryukov, O.A. Bunina, Yu. I. Golovko, V.B. Shirokov, V. M. Mukhortov, M. El Marssi  
*Direct transition from the rhombohedral ferroelectric to the paraelectric phase in  $(Ba,Sr)TiO_3$  thin film*

*o n*  
**EPL**

( 1 1 1 )  
**(Europhysics**

*M g O*  
**Letters)**112  
(4),

*s u b s t r a t e*  
47001(2015)

B. Asbani, J.-L. Dellis, Y. Gagou, H. Kaddoussi, A. Lahmar, M. Amjoud, D. Mezzane, Z. Kutnjak, M. El  
M a r s s i  
*Electrocaloric effect in Ba0. 2Ca0. 8Ti0. 95Ge0. 05O3 determined by a new pyroelectric method*  
**EPL (Europhysics Letters)**111, 57008 (2015)