

**Papers published in the framework of the grant in ISI quoted
journals or presented at International Conferences**

I. Magnetic tunneling junctions

a. Scientific papers

a.1. Structural, electronic, magnetic and spin dependent transport properties of Fe/CaS/Fe(001) heterostructures

P. Vlaic, E. Burzo, K. Carva
Journal of Applied Physics, 113, 053715 (2013), IF = 2.185

a.2. Impact of Fe/NaCl(001) interface structure on electronic, magnetic and spin polarized transport of Fe/NaCl/Fe(001) heterojunctions: An-ab initio study

P. Vlaic, E. Burzo, K. Carva
Journal of Alloys and Compounds, 598, 41 (2014), IF = 2.734

a.3. Oscillatory exchange coupling and strong direct tunneling in AgCl based heterojunctions

P. Vlaic, E. Burzo, K. Carva
Journal of Alloys and Compounds, 630, 299 (2015), IF = 3.01

a.4. Spin polarized transport utilizing d^0 ferromagnetism: an ab initio study of CaC/MgS/CaC(001) heterojunctions

P. Vlaic, E. Burzo, K. Carva
Journal of Physics D: Applied Physics, 48, 455002 (2015), IF = 2.772

a.5. Are insulating LiF barriers relevant for spin-polarized tunneling applications? Insights from first-principles calculations

P. Vlaic, E. Burzo, K. Carva
Journal of Physics D: Applied Physics, 49, 305302 (2016), IF = 2.772

a.6. Magnetic and electronic transport properties of some tunnel junctions with AgBr Δ_1 symmetry-filter barriers

P. Vlaic, E. Burzo, K. Carva
Journal of Physics: Condensed Matter - sent for publication

b. Presented at International Conferences

b.1. *Magnetic and spin dependent transport properties of SrC/NaCl/(CaS)/SrC (001) tunnel junctions*

P. Vlaic, E. Burzo

“Fifth Seeheim Conference on Magnetism” Frankfurt, Germany, 29.09.2013 - 3.10.2013 - [Poster paper](#)

b.2. *Electronic structure and spin polarized transport characteristics of CaC/LiCl(MgS)/CaC(001) heterojunctions*

P. Vlaic, E. Burzo

TIM14 International Conference of Physics, Timișoara, 20.11.2014 - 22.11.2014 - Oral presentation

b.3. *Electronic properties of Fe/LiF(LiBr)/Fe magnetic tunnel junctions*

E. Burzo, P. Vlaic

[Invited lecture](#), The 15th International Balkan Workshop on Applied Physics, 2-4 July 2015, SO-02 p. 15

b.4. *Spin polarized transport in Fe/NaBr(001) based heterojunctions*

E. Burzo, P. Vlaic

Invited lecture, S1 L2 The 16th International Balkan Workshop on Applied Physics, July 2016, p. 12

b.5. *Spin dependent transport properties in magnetic tunnel junctions with NaBr-AgBr based barriers*

P. Vlaic, E. Burzo

11th International Conference on Physics of Advanced Material, Cluj-Napoca, September 2016, p. 309 - [Poster paper T4-P14](#)

II. Materials of interest for spin electronics

a. Scientific papers

a.7. *Magnetic and transport properties of $\text{Ca}_{1.5}\text{La}_{0.5}\text{FeMo}_{1-x}\text{W}_x\text{O}_6$ perovskites*

E. Burzo, I. Balasz, M. Văleanu, D.P. Kozlenko, S.E. Kichanov, A.V. Rutkauskas, B.N. Savenko
Journal of Alloys and Compounds 621, 71 (2015), IF = 2.734

a.8. *Structural and magnetic properties of $\text{Ca}_{1.5}\text{La}_{0.5}\text{FeMoO}_6$ perovskite at high pressures*

E. Burzo, D.P. Kozlenko, N.T. Dang, S.E. Kichanov, N.O. Golosova
Journal of Alloys and Compounds, 664, 363 (2016), IF = 3.01

a.9. *Crystal structures, magnetic and transport properties of calcium based perovskites*

E. Burzo, I. Balasz

AIP Conference Proceedings 1722, [080003-1-08003-4](#) (2016)

ISI Journal

a.10. *Ferrimagnetic Ordering of $\text{Ca}(\text{Fe},\text{Na})\text{MoO}_6$ perovskites*

E. Burzo, I. Balasz

Romanian Journal of Physics (2016), accepted for publication, IF = 1.4

b. Presented at International Conferences

b.6. *Magnetoresistive properties of $\text{La}_{1.5}\text{Ca}_{0.5}\text{FeMo}_{1-x}\text{W}_x\text{O}_6$ double perovskites*

E. Burzo, I. Balasz, M. Valeanu, D.P. Kozlenko

7th International Conference on Material Science and Condensed Matter Physics, Chişinău, lucrarea ABM 11B p. 104 - [Poster presentation](#)

INIS RN: 45104894

b.7. *Crystal structures, magnetic and transport properties of calcium based perovskites*

E. Burzo

BPU-9 International Conference, Istanbul 24-27.08.2015, paper 06-OP-13 p. 148 - [Oral presentation](#)

b.8. *Magnetic and electrical properties of $\text{Ca}_2\text{Fe}_{1-x}\text{Ni}_x\text{MoO}_6$ double perovskites*

I. Balasz-Mureşan, A. Fărcaş, E. Burzo

The 15th International Balkan Workshop on Applied Physics, 2-4 July 2015 paper SI p. 35 p. 63 - [Poster paper](#)

b.9. *Magnetic properties of $\text{Ca}_2\text{Fe}_{1-x}\text{Ni}_x\text{MoO}_6$ perovskites*

I. Balasz-Mureşan, E. Burzo

The 11th International Conference on Physics of Advanced Materials, September 2016, Cluj-Napoca, p. 90 - [Poster paper](#)

III. Materials of technical interest: rare-earth compounds

a. Scientific papers

a.1. *Pressure effects on crystal structures and magnetic properties of RCo_5 ($R = \text{Y}$ or Gd) compounds*

E. Burzo, P. Vlaic

AIP Conference Proceedings 1564, [103-110](#) (2013)

ISI Journal

a.2. *Pressure effects on the magnetic behavior of cobalt in rare-earth compounds*

E. Burzo, P. Vlaic, D.P. Kozlenko

Romanian Journal of Physics 60, [200-214](#) (2015), IF = 1.4

a.3. *Sequential Cobalt Magnetization Collapse in ErCo_2 : Beyond the Limits of Itinerant Electron Metamagnetism*

D.P. Kozlenko, E. Burzo, P. Vlaic, S.E. Kichanov, A.V. Rutkauskas, B.N. Savenko

Scientific Reports 5, 8620 (2015), IF = 5.578

a.4. *Exchange enhanced paramagnetism of rare-earth (yttrium) – transition metal compounds*

E. Burzo

AIP Conference Proceedings 1694, [030001-1-030001-6](#) (2015)

ISI Journal

a.5. Magnetic and magnetocaloric properties of $Er_{1-x}Y_xCo_2$ compounds with $x \leq 0.3$

E. Burzo, I. Balasz, L. Chioncel
Romanian Journal of Physics 61, [1213-1223](#) (2016)
ISI Journal IF = 1.4

a.6. Exchange interactions in heavy rare-earth RCo_2 compounds

E. Burzo
Journal of Physics: Conf. Series (in press), 2016
ISI Journal

b. Presented at International Conferences

b.1. Magnetic properties and electronic structures of rare-earth transition metal compounds

E. Burzo
7th International Conference on Material Science and Condensed Matter Physics, 16.09.2014 - 19.09.2014, Chişinău ([Invited lecture](#))
INIS, RN 45104860

b.2. Exchange interactions in heavy rare-earths RCo_2 compounds

E. Burzo
3rd International Conference on small angle Neutron Scattering, Dubna, Russia, June, 2016, p.18 ([invited lecture](#))

b.3. Magnetic and magnetocaloric properties of $(Er_{1-x}Y_x)Co_2$ compounds

I. Balasz, I. Balasz-Mureşan, E. Burzo
The 16th International Balkan Workshop on Applied Physics, Constanţa, July 2016, p. 78 ([poster S2-P73](#))

b.4. Magnetic behavior of RCo_2 compounds where R is a heavy rare-earth

E. Burzo
The 11th International Conference on Physics of Advanced Materials, September 2016, Cluj ([invited lecture](#)), p.253

In the framework of the grant, have been published:

- 16 scientific papers (3 in press) in the ISI quoted journals, 9 of them in the top 25% journals
- 13 papers have been presented at international conferences, 6 of them as invited lectures

The scientific papers published in the framework of the grant were cited by 26 times.