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° ferromagnetism: an ab initio study of CaC/MgS/CaC(001) heterojunctions
P. Vlaic, E. Burzo, K. Carva

a.5. Are insulating LiF barriers relevant for spin-polarized tunneling applications? Insights from first-principles calculations
P. Vlaic, E. Burzo, K. Carva

a.6. Magnetic and electronic transport properties of some tunnel junctions with AgBr A\textsubscript{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

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

II. Materials of interest for spin electronics

a. Scientific papers

a.7. Magnetic and transport properties of Ca$_{1.5}$La$_{0.5}$FeMo$_{1-x}$W$_x$O$_6$ perovskites
E. Burzo, I. Balasz, M. Valeanu, D.P. Kozenko, S.E. Kichanov, A.V. Rutkaukas, B.N. Savenko
Journal of Alloys and Compounds 621, 71 (2015), IF = 2.734

a.8. Structural and magnetic properties of Ca$_{1.5}$La$_{0.5}$FeMoO$_6$ perovskite at high pressures
E. Burzo, D.P. Kozenko, 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

ISI Journal

a.10. Ferrimagnetic Ordering of Ca(Fe,Na)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 La_{1.5}Ca_{0.5}FeMo_{1-x}W_xO_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 Ca_{2}Fe_{1-x}Ni_xMoO_6 double perovskites**
I. Balasz-Mureşan, A. Fărcaș, 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 Ca_{2}Fe_{1-x}Ni_xMoO_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 = 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 ErCo2: 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

ISI Journal
a.5. *Magnetic and magnetocaloric properties of Er$_{1.5}$Y$_x$Co$_2$ 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  
ISI Journal

b. **Presented at International Conferences**

b.1. *Magnetic properties and electronic structures of rare-earth transition metal compounds*  
E. Burzo  
INIS, RN 45104860

b.2. *Exchange interactions in heavy rare-earths RCo$_2$ compounds*  
E. Burzo  
3$^{rd}$ International Conference on small angle Neutron Scattering, Dubna, Russia, June, 2016, p.18 ([invited lecture](#))

b.3. *Magnetic and magnetocaloric properties of (Er$_x$Y$_y$)Co$_2$ compounds*  
I. Balasz, I. Balasz-Mureşan, E. Burzo  
The 16$^{th}$ 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 11$^{th}$ 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.