

Listă Lucrări

I - Listă articole ISI publicate

1. Xu Z., Marius P.L., Huxter W., Herb K., Abendroth J. M., and Bouzehouane K., Boulle O., **Gabor M.S.** Larranaga J.U., Morales A., Rhenius J., Puebla-Hellmann G., Degen C. L., "Minimizing Sensor-Sample Distances in Scanning Nitrogen-Vacancy Magnetometry," *ACS Nano* **19**, 8255–8265 (2024) [IF = 15.8] <https://doi.org/10.1021/acsnano.4c18460>
2. E.M. řtečco, T.Petrisor. Jr., O.A. Pop, M. Belmeguenai, I.M. Miron, **M.S. Gabor***, "Diode and Selective Routing Functionalities Controlled by Geometry in Current-Induced Spin-Orbit Torque Driven Magnetic Domain Wall Devices," *Nano Lett.* **24**, 13991–13997 (2024) [IF = 9.6] <https://doi.org/10.1021/acs.nanolett.4c03339>
3. D. Ourdani, N. Challab, Y. Roussigné, S.M. Chérif, **M.S. Gabor***, M. Belmeguenai, "Temperature dependence and capping and underlayer layers effect on the interfacial magnetic properties of Ir/Fe- or Pt/Fe-based systems," *Phys. Rev. B* **109**, 214426 (2024) [IF = 3.2] <https://doi.org/10.1103/PhysRevB.109.214426>
4. **M.S. Gabor***, M. Belmeguenai, I.M. Miron, "Bulk and interface spin-orbit torques in Pt/Co/MgO thin film structures," *Phys. Rev. B* **109**, 104407 (2024) [IF = 3.2] <https://doi.org/10.1103/PhysRevB.109.104407>
5. D. Ourdani, Y. Roussigné, S.M. Chérif, **M.S. Gabor***, M. Belmeguenai, "Thickness dependence of magnetic properties of Ir / FeV - based systems," *Phys. Rev. Mater.* **7**, 034408 (2023) [IF = 3.1] <https://doi.org/10.1103/PhysRevMaterials.7.034408>
6. N. Challab, Y. Roussigné, S.M. Chérif, **M.S. Gabor**, M. Belmeguenai, "Magnetic Damping and Dzyaloshinskii-Moriya Interactions in

- Pt/Co₂FeAl/MgO Systems Grown on Si and MgO Substrates,” Materials* **16**, 1388 (2023) [IF = 3.1] <https://doi.org/10.3390/ma16041388>
7. F. Popa, T.F. Marinca, B.V. Neamțu, **M.S. Gabor**, I. Chicinaș, ”Structural, Chemical and Magnetic Characterization of Quartz Sand from Cluj Area for Future Beneficiation in the Glass Industry,” *Materials* **15**, 9026 (2022) [IF = 3.4] <https://doi.org/10.3390/ma15249026>
 8. R. Pachat, D. Ourdani, M. Syskaki, A. Lamperti, S. Roy, S. Chen, A.D. Pietro, L. Largeau, R. Juge, M. Massouras, C. Balan, J.W.v.d. Jagt, G. Agnus, Y. Roussigné, **M.S. Gabor**, S.M. Chérif, G. Durin, S. Ono, J. Langer, D. Querlizoz, D. Ravelosona, M. Belmeguenai, L.H. Diez, ”Magneto-Ionics in Annealed W/CoFeB/HfO₂ Thin Films,” *Adv. Mater. Interfaces* **9**, 2200690 (2022) [IF = 5.4] <https://doi.org/10.1002/admi.202200690>
 9. D. Ourdani, M. Belmeguenai, **M.S. Gabor**, A. Stashkevich, Y. Roussigné, ”Theoretical Investigation of Skyrmion Dynamics in Pt/Co/MgO Nanodots,” *Materials* **15**, 7474 (2022) [IF = 3.4] <https://doi.org/10.3390/ma15217474>
 10. D. Ourdani, Y. Roussigné, S.M. Chérif, **M.S. Gabor***, M. Belmeguenai, ”Correlation between interface perpendicular magnetic anisotropy and interfacial Dzyaloshinskii - Moriya interactions in Pt/Pd(t_{Pd}) / Co(t_{Co})/Au,” *J. Phys. D: Appl. Phys.* **55**, 485004 (2022) [IF = 3.4] <https://doi.org/10.1088/1361-6463/ac9487>
 11. B.V. Neamțu, F. Popa, E. Ware, T.F. Marinca, **M.S. Gabor**, F.P. Piglesan, M. Nasui, ”Hydrothermal Deposition of ZnO Layer on Fe-Based Amorphous Fibres Used for the Preparation of Cold Sintered Fibre-Based Soft Magnetic Composites,” *Coatings* **12**, 1527 (2022) [IF = 3.4] <https://doi.org/10.3390/coatings12101527>
 12. J. Nath, A.V. Trifu, **M.S. Gabor**, A. Hallal, S. Auffret, S. Labau, A. Mahjoub, E. Chan, A.K. Chaurasiya, A.K. Mondal, H. Yang, E. Schmoranzerova, M.A. Nsibi, I. Joumard, A. Barman, B. Pelissier, M. Chshiev, G. Gaudin, I.M. Miron, ”Mechanism of Spin-Orbit Torques in Platinum Oxide Systems,” *Adv. Electron. Mater.* **8**, 2101335 (2022) [IF = 6.2] <https://doi.org/10.1002/aelm.202101335>
 13. C. Safeer, M. Nsibi, J. Nath, **M.S. Gabor**, H. Yang, I. Joumard, S. Auffret, G. Gaudin, I. Miron, ”Effect of Chiral Damping on the dynamics of chiral domain walls and skyrmions,” *Nat. Commun.* **13**, 1192 (2022) [IF = 16.6] <https://doi.org/10.1038/s41467-022-28815-6>

14. E.M. Stetco, O.A. Pop, A. Grama, D. Pitica, **M.S. Gabor**, "Manufacturing, Characterization, and Simulation Model Design for a Current Sensor Based on a Spin-Valve Magnetoresistive Microstructure," *IEEE Trans. Compon. Packag. Manuf. Technol.* **12**, 422–428 (2022) [IF = 2.2] <https://doi.org/10.1109/TCPMT.2022.3151952>
15. R. Sonher, M. Nasui, **M.S. Gabor**, T. Petrisor. Jr., L. Ciontea, T. Petrisor, "Effect of glycerol on the thermal decomposition behavior of nickel propionate-based precursor," *J. Anal. Appl. Pyrolysis* **159**, 105289 (2021) [IF = 6.437] <https://doi.org/10.1016/j.jaat.2021.105289>
16. D. Ourdani, Y. Roussigné, S. Chérif, **M.S. Gabor***, M. Belmeguenai, "Dependence of the interfacial Dzyaloshinskii-Moriya interaction, perpendicular magnetic anisotropy, and damping in Co-based systems on the thickness of Pt and Ir layers," *Phys. Rev. B* **104**, 104421 (2021) [IF = 3.908] <https://doi.org/10.1103/PhysRevB.104.104421>
17. D. Ourdani, Y. Roussigné, R. Mos, M. Nasui, S. Chérif, **M.S. Gabor***, M. Belmeguenai, "Hf thickness dependence of perpendicular magnetic anisotropy," *Phys. Rev. Mater.* **5**, 084404 (2021) [IF = 3.98] <https://doi.org/10.1103/PhysRevMaterials.5.084404>
18. D. Ourdani, Y. Roussigné, S. Chérif, **M.S. Gabor**, M. Belmeguenai, "Annealing Temperature and Thickness Dependencies of Perpendicular Magnetic Anisotropy and Dzyaloshinskii-Moriya Interaction of Pt/Co/MgO Thin Films," *IEEE Trans. Magn.* **58**, 1–5 (2022) [IF = 2.1] <https://doi.org/10.1109/TMAG.2021.3089002>
19. R. Pachat, D. Ourdani, J.v.D. Jagt, M. Syskaki, A.D. Pietro, Y. Roussigné, S. Ono, **M.S. Gabor**, M. Chérif, G. Durin, J. Langer, M. Belmeguenai, D. Ravelosona, L.H. Diez, "Multiple Magnetoionic Regimes in Ta/Co₂₀Fe₆₀B₂₀/HfO₂," *Phys. Rev. Applied* **15**, 064055 (2021) [IF = 4.931] <https://doi.org/10.1103/PhysRevApplied.15.064055>
20. M. Nasui, R.B. Sonher, E. Ware, A. Daniel, T. Petrisor, **M.S. Gabor**, L. Ciontea, "Morphological and Structural Evolution of Chemically Deposited Epitaxially LaNiO₃ Thin Films," *Coatings* **11**, 1376 (2021) [IF = 3.236] <https://doi.org/10.3390/coatings11111376>
21. R. One, S. Mican, A. Mesaros, **M.S. Gabor**, T. Petrisor, M. Joldos, L. Buda-Prejbeanu, C. Tiusan, "Perpendicular Magnetic Anisotropy Elec-

*tric Field Modulation in Magnetron - Sputtered Pt/Co/X/MgO Ultra-thin Structures With Chemically Tailored Top Interface,” IEEE Trans. Magn. **57**, 1–10 (2021) [IF = 1.848] <https://doi.org/10.1109/TMAG.2021.3071584>*

22. R. Sonher, R.B. Varga, R.A. Nasui, M. Jr., T. Petrisor, **M.S. Gabor**, M. Senila, A. Rufoloni, T. Petrisor, L. Ciontea, ”*Single Source Precursor for PAD-LaMnO₃ Thin Films,*” *Crystals* **10** (2020) [IF = 2.589] <https://doi.org/10.3390/crust10090851>
23. I.B. Mokhtari, Y. Roussigné, S. Chérif, A. Stashkevich, S. Auffret, C. Baraduc, **M.S. Gabor**, H. Béa, M. Belmeguenai, ”*Interface phenomena in ferromagnet / TaO_x-based systems: Damping, perpendicular magnetic anisotropy, and Dzyaloshinskii - Moriya interaction,*” *Phys. Rev. Mater.* **4**, 124408 (2020) [IF = 3.989] <https://doi.org/10.1103/PhysRevMaterials.4.124408>
24. I.B. Mokhtari, D. Ourdani, Y. Roussigné, R. Mos, M. Nasui, F. Kail, L. Chahed, S. Chérif, A. Stashkevich, **M.S. Gabor**, M. Belmeguenai, ”*Perpendicular magnetic anisotropy and interfacial Dzyaloshinskii-Moriya interaction in as grown and annealed X/Co/Y ultrathin systems,*” *J. Phys.: Condens. Matter* **32** (2020) [IF = 2.333] <https://doi.org/10.1088/1361-648X/abb0a8>
25. I.B. Mokhtari, Y. Roussigné, T. Petrisor. Jr., F. Zighem, F. Kail, L. Chahed, V. Pierron, L. Méchin, **M.S. Gabor**, M. Belmeguenai, ”*Spin Pumping and Magnetic Anisotropy in LSMO / Pt Systems,*” *Phys. Status Solidi B* **257**, 2000265 (2020) [IF = 1.71] <https://doi.org/10.1002/pssb.202000265>
26. B. Neamtu, A. Irimie, F. Popa, **M.S. Gabor**, T. Marinca, I. Chicinas, ”*Soft magnetic composites based on oriented short Fe fibres coated with polymer,*” *J. Alloys Compd.* **840**, 155731 (2020) [IF = 5.316] <https://doi.org/10.1016/j.jallcom.2020.155731>
27. I.B. Mokhtari, D. Ourdani, Y. Roussigné, R. Mos, M. Nasui, S. Chérif, A. Stashkevich, **M.S. Gabor***, M. Belmeguenai, ”*Investigation of the correlation between perpendicular magnetic anisotropy, spin mixing conductance and interfacial Dzyaloshinskii - Moriya interaction in CoFeB-based systems,*” *J. Phys. D: Appl. Phys.* **53**, 505003 (2020) [IF = 3.207] <https://doi.org/10.1088/1361-6463/abb488>

28. **M.S. Gabor***, T. Petrisor Jr., M. Nasui, M.A. Nsibi, J. Nath, I.M. Miron, "Spin-orbit Torques and Magnetization Switching in Perpendicularly Magnetized Epitaxial Pd / Co₂FeAl / MgO Structures," *Phys. Rev. Appl.* **13**, 054039 (2020) [IF = 4.985] <https://doi.org/10.1103/PhysRevApplied.13.054039>
29. **M.S. Gabor***, M. Nasui, A. Timar-Gabor, "Perpendicular magnetic anisotropy in Pt/Co-based full Hensler alloy/MgO thin-film structures," *Phys. Rev. B* **100**, 144438 (2019) [IF = 3.575] <https://doi.org/10.1103/PhysRevB.100.144438>
30. W. Akhtar, A. Hrabec, S. Chouaieb, A. Haykal, I. Gross, M. Belmeguenai, **M.S. Gabor**, B. Shields, P. Maletinsky, A. Thiaville, S. Rohart, V. Jacques, "Current-Induced Nucleation and Dynamics of Skyrmions in a Co-based Hensler Alloy," *Phys. Rev. Appl.* **11**, 034066 (2019) [IF = 4.194] <https://doi.org/10.1103/PhysRevApplied.11.034066>
31. M. Belmeguenai, Y. Roussigné, S.M. Cherif, A. Stashkevich, T. Petrisor, M. Nasui, **M.S. Gabor***, "Influence of the capping layer material on the interfacial Dzyaloshinskii-Moriya interaction in Pt/Co/capping layer structures probed by Brillouin light scattering," *J. Phys. D: Appl. Phys.* **52**, 125002 (2019) [IF = 3.169] <https://doi.org/10.1088/1361-6463/aafdf5>
32. M. Belmeguenai, D. Apalkov, **M.S. Gabor**, F. Zighem, G. Feng, G. Tang, "Magnetic Anisotropy and Damping Constant in CoFeB/Ir and CoFeB/Ru Systems," *IEEE Trans. Magn.* **54**, 1–5 (2018) <https://doi.org/10.1109/TMAG.2018.2844410>
33. M. Belmeguenai, Y. Roussigné, H. Bouloussa, S. Chérif, A. Stashkevich, M. Nasui, **M.S. Gabor***, A. Mora-Hernández, B. Nicholson, O. Inyang, A. Hindmarch, L. Bouchenoire, "Thickness Dependence of the Dzyaloshinskii-Moriya Interaction in Co₂FeAl Ultrathin Films: Effects of Annealing Temperature and Heavy-Metal Material," *Phys. Rev. Appl.* **9**, 044044 (2018) [IF = 4.532] <https://doi.org/10.1103/PhysRevApplied.9.044044>
34. M. Belmeguenai, K. Aitoukaci, F. Zighem, **M.S. Gabor***, T. Petrisor, R. Mos, C. Tiisan, "Investigation of the annealing temperature dependence of the spin pumping in Co₂₀Fe₆₀B₂₀/Pt systems," *J. Appl. Phys.* **123**, 113905 (2018) [IF = 2.328] <https://doi.org/10.1063/1.5011111>

35. T.Petrisor. Jr., A. Meledin, A. Boulle, R. Moş, **M.S. Gabor**, L. Ciontea, T. Petrişor, "Ordered misfit dislocations in epitaxial Gd doped CeO_2 thin films deposited on (001)YSZ single crystal substrates," *Appl. Surf. Sci.* **433**, 668–673 (2018) [IF = 5.155] <https://doi.org/10.1016/j.apsusc.2017.09.202>
36. L. Piperno, A.A. Armenio, A. Vannozzi, V. Galluzzi, V. Pinto, F. Rizzo, A. Augieri, A. Mancini, A. Rufoloni, G. Celentano, R.B. Mos, L. Ciontea, M. Nasui, **M.S. Gabor**, T. Petrisor, G. Sotgiu, "Surface Decoration as a Prospective Artificial Pinning Strategy in Superconducting $YBa_2Cu_3O_{7-x}$ Films," *IEEE Trans. Appl. Supercond.* **28**, 1–5 (2018) [IF = 1.692] <https://doi.org/10.1109/TASC.2018.2804092>
37. M. Belmeguenai, **M.S. Gabor***, Y. Roussigné, T.Petrisor. Jr., R. Mos, A. Stashkevich, S. Chérif, C. Tiusan, "Interfacial Dzyaloshinskii - Moriya interaction sign in Ir/Co₂FeAl systems investigated by Brillouin light scattering," *Phys. Rev. B* **97**, 054425 (2018) [IF = 3.736] <https://doi.org/10.1103/PhysRevB.97.054425>
38. M. Belmeguenai, **M.S. Gabor**, F. Zighem, N. Challab, T. Petrisor, R. Mos, C. Tiusan, "Ferromagnetic-resonance-induced spin pumping in Co₂₀Fe₆₀B₂₀/Pt systems: damping investigation," *J. Phys. D: Appl. Phys.* **51**, 045002 (2018) [IF = 2.829] <https://doi.org/10.1088/1361-6463/aa9f55>
39. **M.S. Gabor***, T. Petrisor, R. Mos, M. Nasui, C. Tiusan, "Interlayer exchange coupling in perpendicularly magnetized Pt / Co / Ir / Co / Pt structures," *J. Phys. D: Appl. Phys.* **50**, 465004 (2017) [IF = 2.373] <https://doi.org/10.1088/1361-6463/aa8ece>
40. F. Zighem, D. Faurie, M. Belmeguenai, N. Girodon-Boulandet, **M.S. Gabor**, P. Djemia, "Annealing effect on elastic, magnetic and magnetoelastic properties of CoFeB thin films on polymer substrate," *J. Phys. D: Appl. Phys.* **50**, 455002 (2017) [IF = 2.373] <https://doi.org/10.1088/1361-6463/aa8d0b>
41. M. Belmeguenai, H. Bouloussa, Y. Roussigné, **M.S. Gabor**, T.Petrisor. Jr., C. Tiusan, H. Yang, A. Stashkevich, S. Chérif, "Interface Dzyaloshinskii - Moriya interaction in the interlayer antiferromagnetic-exchange coupled Pt/CoFeB/Ru/CoFeB systems," *Phys. Rev. B* **96**, 144402 (2017) [IF = 3.813] <https://doi.org/10.1103/PhysRevB.96.144402>

42. M. Nasui, R. Mos, **M.S. Gabor**, T.Petrisor. Jr., A. Tomolea, E. Ware, F. Goga, A. Mesaros, L. Ciontea, "New versatile synthesis for low dimension superparamagnetic $YBa_2Cu_3O_{7-x}$ nanoparticles," *Ceram. Int.* **43**, 8845–8849 (2017) [IF = 3.057] <https://doi.org/10.1016/j.ceramint.2017.04.018>
43. B. Neamțu, H. Chicinaș, G. Ababei, **M.S. Gabor**, T. Marinca, N. Lupu, I. Chicinaș, "A comparative study of the Fe - based amorphous alloy prepared by mechanical alloying and rapid quenching," *J. Alloys Compd.* **703**, 19–25 (2017) [IF = 3.779] <https://doi.org/10.1016/j.jallcom.2017.01.359>
44. M. Belmeguenai, **M.S. Gabor**, Y. Roussigné, S. Chérif, A. Stashkevich, T. Petrisor, R. Mos, C. Tiusan, "Characterization of the Interfacial Dzyaloshinskii - Moriya Interaction in Pt / $Co_2FeAl_{0.5}Si_{0.5}$ Ultra-thin Films by Brillouin Light Scattering," *IEEE Trans. Magn.* **53**, 1–5 (2017) [IF = 1.467] <https://doi.org/10.1109/TMAG.2017.2696241>
45. M. Belmeguenai, **M.S. Gabor***, F. Zighem, C. Tiusan, "Damping and spin mixing conductance in $Ni_{80}Fe_{20}/CuIr$ structures: effect of Ir doping," *J. Phys. D: Appl. Phys.* **50**, 135002 (2017) [IF = 2.373] <https://doi.org/10.1088/1361-6463/aa5b63>
46. M. Belmeguenai, **M.S. Gabor***, F. Zighem, Y. Roussigné, D. Faurie, C. Tiusan, "Annealing temperature and thickness dependencies of structural and magnetic properties of Co_2FeAl thin films," *Phys. Rev. B* **94**, 104424 (2016) [IF = 3.836] <https://doi.org/10.1103/PhysRevB.94.104424>
47. **M.S. Gabor***, T. Petrisor, R. Mos, A. Mesaros, M. Nasui, M. Belmeguenai, F. Zighem, C. Tiusan, "Spin-orbit torques and magnetization switching in $W/Co_2FeAl/MgO$ structures," *J. Phys. D: Appl. Phys.* **49**, 365003 (2016) [IF = 2.588] <https://doi.org/10.1088/0022-3727/49/36/365003>
48. T. Dippong, E.A. Levei, C. Tanaselia, **M.S. Gabor**, M. Nasui, L.B. Tudoran, G. Borodi, "Magnetic properties evolution of the $Co_xFe_{3-x}O_4$ / SiO_2 system due to advanced thermal treatment at 700 °C and 1000 °C," *J. Magn. Magn. Mater.* **410**, 47–54 (2016) [IF = 2.5] <https://doi.org/10.1016/j.jmmm.2016.03.020>
49. M. Gueye, F. Zighem, M. Belmeguenai, **M.S. Gabor**, C. Tiusan, D. Faurie, "Ferromagnetic resonance in thin films submitted to multiaxial

- stress state: application of the uniaxial equivalent stress concept and experimental validation,”* *J. Phys. D: Appl. Phys.* **49**, 265001 (2016) [IF = 2.588] <https://doi.org/10.1088/0022-3727/49/26/265001>
50. R. Mos, T.Petrisor. Jr., M. Nasui, A. Mesaros, **M.S. Gabor**, M. Senila, E. Ware, L. Ciontea, T. Petrisor, ”*Epitaxial $La_{0.7}Sr_{0.3}MnO_3$ nanostructures obtained by polymer-assisted surface decoration (PASD),”* *Mater. Lett.* **171**, 281–284 (2016) [IF = 2.572] <https://doi.org/10.1016/j.matlet.2016.02.122>
 51. M. Belmeguenai, **M.S. Gabor***, Y. Roussigné, A. Stashkevich, S. Chérif, F. Zighem, C. Tiisan, ”*Brillouin light scattering investigation of the thickness dependence of Dzyaloshinskii-Moriya interaction in $Co_{0.5}Fe_{0.5}$ ultrathin films,*” *Phys. Rev. B* **93**, 174407 (2016) [IF = 3.836] <https://doi.org/10.1103/PhysRevB.93.174407>
 52. M. Gueye, F. Zighem, M. Belmeguenai, **M.S. Gabor**, C. Tiisan, D. Faurie, ”*Spectroscopic investigation of elastic and magnetoelastic properties of CoFeB thin films,*” *J. Phys. D: Appl. Phys.* **49**, 145003 (2016) [IF = 2.588] <https://doi.org/10.1088/0022-3727/49/14/145003>
 53. M. Belmeguenai, **M.S. Gabor**, F. Zighem, D. Berling, Y. Roussigné, T.Petrisor. Jr., S. Chérif, C. Tiisan, O. Brinza, P. Moch, ”*Static and dynamic magnetic properties of Co_2FeAl -based stripe arrays,*” *J. Magn. Magn. Mater.* **399**, 199–206 (2016) [IF = 2.63] <https://doi.org/10.1016/j.jmmm.2015.09.065>
 54. **M.S. Gabor***, T. Petrisor. Jr., O. Pop, S. Colis, C. Tiisan, ”*Temperature dependence of the perpendicular magnetic anisotropy in Ta / Co_2FeAl / MgO structures probed by Anomalous Hall Effect,*” *J. Magn. Magn. Mater.* **392**, 79–82 (2015) [IF = 2.357] <https://doi.org/10.1016/j.jmmm.2015.05.013>
 55. **M.S. Gabor***, M. Belmeguenai, T.Petrisor. Jr., C. Ulhaq-Bouillet, S. Colis, C. Tiisan, ”*Correlations between structural, electronic transport, and magnetic properties of $Co_2FeAl_{0.5}Si_{0.5}$ Heusler alloy epitaxial thin films,*” *Phys. Rev. B* **92**, 054433 (2015) [IF = 3.718] <https://doi.org/10.1103/PhysRevB.92.054433>
 56. M. Gueye, F. Zighem, M. Belmeguenai, **M.S. Gabor**, C. Tiisan, D. Faurie, ”*Effective 90-degree magnetization rotation in Co_2FeAl thin film/piezoelectric system probed by microstripline ferromagnetic resonance,*” *Appl. Phys. Lett.* **107**, 032908 (2015) [IF = 3.412] <https://doi.org/10.1063/1.4927308>

57. A. Stashkevich, M. Belmeguenai, Y. Roussigné, S. Cherif, M. Kostylev, **M.S. Gabor**, D. Lacour, C. Tiusan, M. Hehn, "Experimental study of spin-wave dispersion in Py/Pt film structures in the presence of an interface Dzyaloshinskii-Moriya interaction," *Phys. Rev. B* **91**, 214409 (2015) [IF = 3.718] <https://doi.org/10.1103/PhysRevB.91.214409>
58. M. Belmeguenai, **M.S. Gabor**, Y. Roussigné, F. Zighem, S. Chérif, C. Tiusan, "Perpendicular Magnetic Anisotropy in CFA Thin Films: Effect of Annealing Temperature," *IEEE Trans. Magn.* **51**, 1–4 (2015) [IF = 1.277] <https://doi.org/10.1109/TMAG.2015.2435815>
59. M. Nasui, T. Petrisor. Jr., R. Mos, **M.S. Gabor**, A. Mesaros, F. Goga, L. Ciontea, T. Petrisor, "Fluorine-free propionate route for the chemical solution deposition of $YBa_2Cu_3O_{7-x}$ superconducting films," *Ceram. Int.* **31**, 4416–4421 (2015) [IF = 2.758] <https://doi.org/10.1016/j.ceramint.2014.11.132>
60. M. Belmeguenai, **M.S. Gabor***, T. Petrisor, F. Zighem, S. Chérif, C. Tiusan, "Capping layer-tailored interface magnetic anisotropy in ultrathin Co_2FeAl films," *J. Appl. Phys.* **117**, 023906 (2015) [IF = 2.101] <https://doi.org/10.1063/1.4905688>
61. M. Belmeguenai, H. Tuzcuoglu, **M.S. Gabor**, T. Petrisor, C. Tiusan, D. Berling, F. Zighem, S.M. Chérif, "Magnetic and structural properties of Co_2FeAl thin films grown on Si substrate," *J. Magn. Magn. Mater.* **373**, 140–143 (2015) [IF = 2.357] <https://doi.org/10.1016/j.jmmm.2014.02.014>
62. **M.S. Gabor***, M. Belmeguenai, F. Zighem, S. Chérif, T. Petrisor. Jr., T. Petrisor, C. Tiusan, M. Hehn, "Electronic, structural and magnetic properties of Co_2FeAl thin films for potential spintronic applications," *Spin* **4**, 1440022 (2014) [IF = 2.06] <https://doi.org/10.1142/S2010324714400220>
63. T. Petrisor, R. Mos, M. Nasui, **M.S. Gabor**, A. Augieri, G. Celenzano, D. Felikis, E. Bemporad, L. Ciontea, T. Petrisor, "The Vortex Path Model Analysis of the Field Angle Dependence of the Critical Current Density in Nanocomposite $YBa_2Cu_3O_{7-x}$ - $BaZrO_3$ Films Obtained by Low Fluorine Chemical Solution Deposition," *J. Supercond. Nov. Magn.* **27**, 2493–2500 (2014) [IF = 0.909] <https://doi.org/10.1007/s10948-014-2712-z>

64. **M.S. Gabor***, C. Tiusan, T. Petrisor, "The Influence of the Capping Layer on the Perpendicular Magnetic Anisotropy in Permalloy Thin Films," *IEEE Trans. Magn.* **50**, 1–4 (2014) <https://doi.org/10.1109/TMAG.2014.2320296>
65. M. Gueye, B. Wague, F. Zighem, M. Belmeguenai, **M.S. Gabor**, T. Petrisor, C. Tiusan, S. Mercone, D. Faurie, "Bending strain-tunable magnetic anisotropy in Co_2FeAl Heusler thin film on Kapton," *Appl. Phys. Lett.* **105** (2014) [IF = 3.302] <https://doi.org/10.1063/1.4893157>
66. A. Mesaros, C.D. Ghitulica, M. Popa, R. Mereu, A. Popa, T. Petrisor Jr., **M.S. Gabor**, A.I. Cadis, B.S. Vasile, "Synthesis, structural and morphological characteristics, magnetic and optical properties of Co doped ZnO nanoparticles," *Ceram. Int.* **40**, 2835–2846 (2014) [IF = 2.605] <https://doi.org/10.1016/j.ceramint.2013.10.030>
67. M. Belmeguenai, H. Tuzcuoglu, **M.S. Gabor***, T. Petrisor, C. Tiusan, F. Zighem, S. Chérif, P. Moch, " Co_2FeAl Heusler thin films grown on Si and MgO substrates: Annealing temperature effect," *J. Appl. Phys.* **115**(2014) <https://doi.org/10.1063/1.4863398>
68. **M.S. Gabor***, C. Tiusan, T. Petrisor Jr., T. Petrisor, M. Hehn, Y. Lu, E. Snoeck, "Structural defects analysis versus spin polarized tunneling in $Co_2FeAl/MgO/CoFe$ magnetic tunnel junctions with thick MgO barriers," *J. Magn. Magn. Mater.* **347**, 79–85 (2013) [IF = 2.002] <https://doi.org/10.1016/j.jmmm.2013.07.028>
69. R.A. Mereu, A. Mesaros, T. Petrisor Jr., **M.S. Gabor**, M. Popa, L. Ciontea, T. Petrisor, "Synthesis, characterization and thermal decomposition study of zinc propionate as a precursor for ZnO nano-powders and thin films," *J. Anal. Appl. Pyrolysis* **104**, 653–659 (2013) [IF = 3.07] <https://doi.org/10.1016/j.jaap.2013.05.001>
70. M. Popa, A. Mesaros, R. Mereu, R. Suciu, B. Vasile, **M.S. Gabor**, L. Ciontea, T. Petrisor, "Optical properties correlated with morphology and structure of TEAH modified ZnO nanoparticles via precipitation method," *J. Alloys Compd.* **574**, 255–259 (2013) [IF = 2.726] <https://doi.org/10.1016/j.jallcom.2013.04.078>
71. R. Mereu, A. Mesaros, M. Vasilescu, M. Popa, **M.S. Gabor**, L. Ciontea, T. Petrisor, "Synthesis and characterization of undoped, Al and/or Ho

- doped ZnO thin films,”* *Ceram. Int.* **39**, 5535–5543 (2013) [IF = 2.086] <https://doi.org/10.1016/j.ceramint.2012.12.067>
72. M. Belmeguenai, H. Tuzcuoglu, **M.S. Gabor**, T.Petrisor. Jr., C. Tiusan, D. Berling, F. Zighem, T. Chauveau, S. Chérif, P. Moch, ”*Co₂FeAl thin films grown on MgO substrates: Correlation between static, dynamic, and structural properties,*” *Phys. Rev. B* **87**, 184431 (2013) [IF = 3.664] <https://doi.org/10.1103/PhysRevB.87.184431>
73. R. Mos, T.Petrisor. Jr., **M.S. Gabor**, A. Mancini, A. Rufoloni, G. Celentano, A. Falqui, A. Genovese, R. Ruffilli, L. Ciontea, T. Petrisor, ”*Epitaxial growth and characterization of La₂Zr₂O₇ multilayers on bi-axially textured NiW substrate by chemical solution deposition under highly reducing conditions,*” *Thin Solid Films* **531**, 491–498 (2013) [IF = 1.867] <https://doi.org/10.1016/j.tsf.2013.01.099>
74. V. Saracut, M. Giloan, **M.S. Gabor**, S. Astilean, C. Farcau, ”*Polarization-Sensitive Linear Plasmonic Nanostructures via Colloidal Lithography with Uniaxial Colloidal Arrays,*” *ACS Appl. Mater. Interfaces* **5**, 1362–1369 (2013) [IF = 5.9] <https://doi.org/10.1021/am3026745>
75. M. Popa, R. Mereu, M. Filip, **M.S. Gabor**, T.Petrisor. Jr., L. Ciontea, T. Petrisor, ”*Highly c-axis oriented ZnO thin film using 1-propanol as solvent in sol-gel synthesis,*” *Mater. Lett.* **92**, 267–270 (2013) [IF = 2.269] <https://doi.org/10.1016/j.matlet.2012.10.099>
76. **M.S. Gabor***, T. Petrisor, C. Tiusan, ”*Perpendicular magnetic anisotropy in Ta/Co₂FeAl/MgO multilayers,*” *J. Appl. Phys.* **114**, 063905 (2013) [IF = 2.185] <https://doi.org/10.1063/1.4818326>
77. T. Petrisor, **M.S. Gabor**, C. Tiusan, V. Galluzzi, G. Celentano, S. Popa, A. Boulle, ”*Magnetic pinning effects of epitaxial La_xSr_{1-x}MnO₃ nanostructured thin films on YBa₂Cu₃O_{7-δ} layers,*” *J. Appl. Phys.* **112** (2012) [IF = 2.21] <https://doi.org/10.1063/1.4748049>
78. R. Mos, M. Nasui, T.Petrisor. Jr., **M.S. Gabor**, R. Varga, L. Ciontea, ”*Synthesis, crystal structure and thermal decomposition of Zr₆O₄(OH)₄(CH₃CH₂COO)₁₂,*” *J. Anal. Appl. Pyrolysis* **97**, 137–142 (2012) [IF = 2.56] <https://doi.org/10.1016/j.jaap.2012.06.010>
79. T. Ristoiu, T.Petrisor. Jr., **M.S. Gabor**, S. Rada, F. Popa, L. Ciontea, T. Petrisor, ”*Electrical properties of ceria/carbonate nanocomposites,*” *J. Alloys Compd.* **532**, 109–113 (2012) [IF = 2.39] <https://doi.org/10.1016/j.jallcom.2012.03.098>

80. L. Ciontea, T. Ristoiu, R. Mos, M. Nasui, T. Petrisor. Jr., **M.S. Gabor**, A. Mancini, A. Rufoloni, G. Celentano, T. Petrisor, "Epitaxial growth of CeO_2 thin film on cube textured NiW substrate using a propionate-based metalorganic deposition (MOD) method," *Mater. Chem. Phys.* **133**, 772–778 (2012) [IF = 2.072] <https://doi.org/10.1016/j.matchemphys.2012.01.092>
81. **M.S. Gabor***, T. Petrisor. Jr., C. Tiusan, M. Hehn, B. Vasile, T. Petrisor, "Influence of a TiO_2 buffer layer on the magnetic properties of anatase $Co:TiO_2$ thin films," *J. Appl. Phys.* **111**(8) (2012) <https://doi.org/10.1063/1.4706570>
82. R. Mos, M. Nasui, T. Petrisor. Jr., **M.S. Gabor**, R. Varga, L. Ciontea, T. Petrisor, "Synthesis, crystal structure and thermal decomposition study of a new barium acetato-propionate complex," *J. Anal. Appl. Pyrolysis* **92**, 445–449 (2011) [IF = 2.487] <https://doi.org/10.1016/j.jaap.2011.08.007>
83. M. Nasui, R. Mos, T. Petrisor. Jr., **M.S. Gabor**, R. Varga, L. Ciontea, T. Petrisor, "Synthesis, crystal structure and thermal decomposition of a new copper propionate $[Cu(CH_3CH_2COO)_2] \cdot 2H_2O$," *J. Anal. Appl. Pyrolysis* **92**, 439–444 (2011) [IF = 2.487] <https://doi.org/10.1016/j.jaap.2011.08.005>
84. **M.S. Gabor**, T. Petrisor. Jr., C. Tiusan, M. Hehn, T. Petrisor, "Magnetic and structural anisotropies of $CoFeAl$ Heusler alloy epitaxial thin films," *Phys. Rev. B* **84**, 134413 (2011) [IF = 3.691] <https://doi.org/10.1103/PhysRevB.84.134413>
85. T. Petrisor Jr., **M. S. Gabor**, A. Boulle, C. Bellouard, C. Tiusan; O. Pana, T. Petrisor "Oxygen incorporation effects in annealed epitaxial $La_{1-x}Sr_xMnO_3$ thin films," *J. Appl. Phys.* **109** (2011) [IF = 2.168] <https://doi.org/10.1063/1.3596807>
86. G. Ortiz, **M.S. Gabor**, T. Petrisor. Jr., F. Boust, F. Issac, C. Tiusan, M. Hehn, J. Bobo, "Static and dynamic magnetic properties of epitaxial Co_2FeAl Heusler alloy thin films," *J. Appl. Phys.* **109** (2011) [IF = 2.168] <https://doi.org/10.1063/1.3549581>
87. L. Ciontea, M. Nasui, T. Petrisor. Jr., R. Mos, **M.S. Gabor**, R. Varga, T. Petrisor, "Synthesis, crystal structure and thermal decomposition of $[La_2(CH_3CH_2COO)_6(H_2O)_3] \cdot 3.5H_2O$ precursor for high- k La_2O_3 thin

- films deposition,” Mater. Res. Bull.* **45**, 1203–1208 (2010) [IF = 2.146] <https://doi.org/10.1016/j.materresbull.2010.05.019>
88. M. Nasui, T.Petrisor. Jr., R. Mos, **M.S. Gabor**, T. Ristoiu, A. Rufoloni, L. Ciontea, T. Petrisor, ”*Precursor chemistry for the solution deposition of epitaxial $La_{0.66}Sr_{0.33}MnO_3$ (LSMO) thin films,*” *Thin Solid Films* **518**, 4753–4756 (2010) [IF = 1.935] <https://doi.org/10.1016/j.tsf.2009.12.076>
 89. R. Mos, **M.S. Gabor**, M. Nasui, T.Petrisor. Jr., C. Badea, A. Rufoloni, L. Ciontea, T. Petrisor, ”*Synthesis of epitaxial $BaZrO_3$ thin films by chemical solution deposition,*” *Thin Solid Films* **518**, 4714–4717 (2010) [IF = 1.935] <https://doi.org/10.1016/j.tsf.2009.12.066>
 90. V. Canpean, S. Astilean, T.Petrisor. Jr., **M.S. Gabor**, I. Ciascăi, ”*Convective assembly of two - dimensional nanosphere lithographic masks*” *Mater. Lett.* **63**, 1834–1836 (2009) [IF = 1.94] <https://doi.org/10.1016/j.matlet.2009.05.048>

(*) indică autorul corespondent.

II - Teză de doctorat

1. Doctorat în *Ingineria Materialelor* acordat de Universitatea Tehnică din Cluj-Napoca, România și Doctorat în *Fizică* acordat de Universitatea Henri Poincaré, Nancy, Franța. Teză realizată în cadrul unui acord de co-tutelă internațional.
Spintronica cu Materiale Alternative: Aliaje Heusler și Oxizi Magnetici
Diluați https://hal.univ-lorraine.fr/tel-01746191/file/SCD_T_2011_0040_GABOR.pdf

III - Capitole de cărți

1. Chapter.V: *Characterization of Complex Spintronic and Superconducting Structures by Atomic Force Microscopy Techniques* in ”*Scanning Probe Microscopy - Physical Property Characterization at Nanoscale*”, L. Ciontea, M.S. Gabor, T. Petrisor Jr., T. Ristoiu, C. Tiușan and T. Petrisor, Publisher: InTech Editat de către Vijay Nalladega, Aprilie 2012, ISBN 978-953-51-0576-3.

2. Capitolul I : *Anizotropia magnetică în filme subțiri* în "Filme subțiri: Creștere și proprietăți", de M.S. Gabor, M. Năsui, T. Petrișor jr., R.B. Sohner, UTPRESS Cluj - Napoca, 2025, ISBN 978-606-737-751-4

IV - Cărți și manuale didactice

1. *Micro și nanotehnologii. Tehnici de fabricare și caracterizare a filmelor subțiri cu aplicații în microelectronică* C. Tiușan, T. Petrisor Jr., M. Gabor, Editura UTPRES 2013, 193 pagini, ISBN 978-973-662-824-5.
2. *Mecanică cuantică prin aplicații* C. Tiușan, M. Gabor. T. Petrisor Jr., Editura UTPRES 2013, 258 pagini, ISBN 978-973-662-825-2.
3. *Fizică I* M.S. Gabor, Editura UTPRESS 2025, 256 pagini, Cluj-Napoca, ISBN 978-606-737-759-0.
4. *Fizică II* M.S. Gabor, Editura UTPPRESS 2025, 346 pagini, Cluj-Napoca, ISBN 978-606-737-760-6.

Cluj-Napoca,
28.04.2025

Mihai S. GABOR