

Short Curriculum Vitae

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Scientific Interests: Modeling and simulation methods in Solid State Physics, Propagation and Scattering of ultrasonic waves, Design and growth of nanostructured thin films.
Scientific Publications: More than 90 articles in regular scientific journals and more than 50 contributions in International Conferences

Recent Publications (Since 2007)

1. Structural differences of amorphous Cu₆₅Zr₃₅ between rapidly quenched and topologically destabilized crystalline Cu and Zr metals by molecular dynamics simulations, de Oliveira, M. F.; Almyras, G. A.; Evangelakis, G. A., *Comp. Mater. Sci.* **104** (2015) 92
2. Probing the structure of a liquid metal during vitrification, K. Georgarakis, L. Henet, G.A. Evangelakis, J. Antonowicz, G.B. Bokas, V. Honkimaki, A. Bytchkov, M.W. Chen, A.R. Yavari, *Acta Materialia*, **87** (2015) 174
3. The role of Sn doping in the beta-type Ti-25 at%Nb alloys: Experiment and ab initio calculations, J.J. Gutiérrez-Moreno, Y. Guo, K. Georgarakis, A.R. Yavari, G.A. Evangelakis, Ch.E. Lekka, **615** (2014) S676
4. Local atomic order, electronic structure and electron transport properties of Cu-Zr metallic glasses, J. Antonowicz, A. Pietnoczka, K. Pękała, J. Latuch and G. A. Evangelakis, *J. Applied. Physics*, **115** (2014) 203714
5. Structure and deformation behavior of Zr-Cu thin films deposited on Kapton substrates, I. Bataev, N.T. Panagiotopoulos, F. Charlot, A.M. Jorge Junior, M. Pons, G.A. Evangelakis, A.R. Yavari, *Surf. Coat. Techn.* **239** (2014) 171
6. On the role of Icosahedral-like clusters in the solidification and the mechanical response of Cu-Zr metallic glasses by Molecular Dynamics simulations and Density Functional Theory computations, G.B. Bokas, A.E. Lagogianni, G.A. Almyras, Ch.E. Lekka, D.G. Papageorgiou, G.A. Evangelakis, *Intermetallics*, **43** (2013) 138
7. Clustering, microalloying and mechanical properties in Cu/Zr-based glassy models by molecular dynamics simulations and ab-initio computations, Ch.E. Lekka, G.B. Bokas, G.A. Almyras, D.G. Papageorgiou, G.A. Evangelakis, *J. Alloys and Comps* **536** (2012). S65-S69
8. Tetragonal or monoclinic ZrO₂ thin films from Zr-based glassy templates, N.T. Panagiotopoulos, J. Kovač, U. Cvelbar, P. Patsalas, M. Mozetic, G.A. Evangelakis, *J. Vacuum Sci. and Tech. A* **30** (2012) 051510

9. Icosahedral order in Cu-Zr amorphous alloys studied by means of X-ray absorption fine structure and molecular dynamics simulations, J. Antonowicz, A. Pietnoczka, T. Drobiazg, G.A. Almyras, D.G. Papageorgiou, G.A. Evangelakis, *Phil. Mag.* **92**, (2012) 1865
10. Surface properties of the Cu₅₀Zr₅₀ metallic glass decorated with icosahedral Cu_xZr_{100-x} (0 < x < 100) clusters by molecular dynamics simulations, A.E. Lagogianni, D.G Papageorgiou, G.A. Evangelakis, *Comp. Mat. Sci.* **54**, (2012) 145-149
11. Formation of tetragonal or monoclinic ZrO₂ coatings by oxygen plasma treatment of Zr_{74.7}Cu_{19.7}Nb_{5.6} glassy thin films, N.T. Panagiotopoulos, J. Kovač, M. Mozetič, P. Patsalas, G.A. Evangelakis, *J. Vac. Sci. Techn. A: Vacuum, Surfaces and Films* **29** (2011) 051303
12. Modifications of Cu_xZr_{12-x}Y Icosahedra upon (0 < x < 12, y = Be, Mg, Al, Si, P, Nb, Ag) substitutions by density functional theory computations, G.B. Bokas, G.A. Evangelakis, Ch.E. Lekka, *Comp. Mater. Sci.*, **50** (2011) 2658
13. Atomic cluster arrangements in Reverse Monte Carlo and Molecular Dynamics structural models of binary Cu-Zr Metallic Glasses, G.A. Almyras, D.G. Papageorgiou, Ch.E. Lekka, N. Mattern, J. Eckert, G.A. Evangelakis, *Intermetallics*, **19** (2011) 657
14. Electronic properties and bonding characteristics of AlN:Ag thin film nanocomposites, Ch.E. Lekka, P. Patsalas, P. Komninou, G.A. Evangelakis, *J. Appl. Phys.* **109** (2011) 54310
15. On the origin of the substrate-induced oxidation of Ni/NiO(001) studied by X-ray Photoelectron Spectroscopy and Molecular Dynamics Simulations, M. Symianakis, G.A. Evangelakis, S. Ladas, *Surf. Sci.* **604** (2010) 943
16. On the deposition mechanisms and the formation of glassy Cu-Zr thin films, G.A. Almyras, G.M. Matenoglou, P. Komninou, C. Kosmidis, P. Patsalas, G.A. Evangelakis, *J. Appl. Phys.* **107** (2010) 84313
17. On the microstructure of the Cu₆₅Zr₃₅ and Cu₃₅Zr₆₅ metallic glasses, G.A. Almyras, Ch.E. Lekka, N. Mattern, G.A. Evangelakis, *Scri. Mater.* **62** (2010) 33
18. Metal-containing amorphous carbon (a-C:Ag) and AlN (AlN:Ag) metallo-dielectric nanocomposites, G.M. Matenoglou, H. Zoubos, A. Lotsari, Ch.E. Lekka, Ph. Komninou, G.P. Dimitrakopoulos, C. Kosmidis, G.A. Evangelakis, P. Patsalas, *Thin Solid Films*, **518** (2009) 1508
19. Structure, stability and bonding of ternary transition metal nitrides, G.M. Matenoglou, L.E., Koutsokeras, Ch.E., Lekka, G., Abadias, G., C. Kosmidis, G.A. Evangelakis, P. Patsalas, *Surf. Coating Techn.* **204** (2009) 911
20. Bonding characteristics and strengthening of CuZr fundamental clusters upon small Al additions from density functional theory calculations, Ch.E. Lekka, G.A. Evangelakis, *Scri. Mater.* **61** (2009) 974
21. Static and dynamic tight-binding simulations of the binary NbMo and CuZr alloys, Ch.E. Lekka, D.A., Papaconstantopoulos, M.J., Mehl, D., Finkenstadt, G.A., Evangelakis, *J. Alloys Compds*, **483** (2009) 627
22. Structural characteristics of Cu_xZr_{100-x} metallic glasses by Molecular Dynamics Simulations, A.E. Lagogianni, G.A. Almyras, Ch.E. Lekka, D.G. Papageorgiou, G.A. Evangelakis, *J. Alloys Compds*, **483** (2009) 658
23. Molecular dynamics study of Pb-substituted Cu(1 0 0) surface layers, G.A. Evangelakis, V. Pontikis, *J. Alloys Compds*, **483** (2009) 662

24. Structural and vibrational properties of deposited Cu or Zr surface adlayers on Cu₄₆Zr₅₄ bulk metallic glass, D.G. Papageorgiou, A. Ibenskas, Ch.E. Lekka and G.A. Evangelakis, *Rev. Adv. Mat. Sci.*, **18** (2008) 98
25. Molecular Dynamics Simulations of Zr₂Ni(100) surface in presence of Zr or Ni adatoms, Ch.E. Lekka and G.A. Evangelakis, *Surf. Sci.* **602** (2008) 590
26. Adlayer deposition induced surface crystallization of Cu₄₆Zr₅₄ bulk metallic glass, D.G. Papageorgiou, G.A. Evangelakis, *Surf. Sci.* **602** (2008) 1486
27. Conducting transition metal nitride thin films with tailored cell sizes: The case of δ -Ti_xTa_{1-x}N, L.E. Koutsokeras, G. Abadias, Ch.E. Lekka, G.M. Matenoglou, D.F. Anagnostopoulos, G.A. Evangelakis, P. Patsalas, *Appl. Phys. Lett.* **93**, 011904 (2008)
28. Shear band melting and serrated flow in metallic glasses, K. Georgarakis, M. Aljerf, Y. Li, A. LeMoulec, F. Charlot, A.R. Yavari, K. Chornokhvostenko, E. Tabachnikova, G.A. Evangelakis, D.B. Miracle, A.L. Greer, T. Zhang, *Appl. Phys. Lett.* **93**, 031907 (2008)
29. Tensile deformation accommodation in microscopic metallic glasses via subnanocluster reconstructions, *Appl. Phys. Lett.*, **91**, (2007) 214103
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31. Surface Properties and Activity of Fe-Ni-B Ternary Glasses, P. Patsalas, A. Lekatou, E. Pavlidou, S. Foulis, M. Kamaratos, G.A. Evangelakis, A.R. Yavari, *J. Alloys and Comp.* **434-435**, (2007) 229
32. Pulsed laser deposition of amorphous carbon/silver nanocomposites G. Matenoglou, G.A. Evangelakis, D. Papadimitriou, S. Foulis, K. Kosmidis, and P. Patsalas, *Appl. Surf. Sci.* **253** 8155 (2007)
33. Dynamical properties of the Ni₃Al low index surfaces with and without Ni or Al adatoms from molecular dynamics simulations, Ch.E. Lekka, G.A. Evangelakis, *Mater. Chem. Phys.* **103** (2007) 500
34. Structural, Thermodynamic and Mechanical properties of Zr based binary nanowires (ZrCu and Zr₂Ni) by Molecular Dynamics, A. Ibenskas, Ch.E. Lekka and G.A. Evangelakis, *Phys. E* **37** (2007) 189
35. Hybrid pulsed laser deposition of TiCu-N ternary nitride thin films, G. Matenoglou, G.A. Evangelakis, C. Kosmidis, P. Patsalas, *Rev. Adv. Mater. Sci.* **14** (2007) 14
36. Optimized pulsed laser deposition by wavelength and static electric field control: The case of tetrahedral amorphous carbon films, P. Patsalas, S. Kazianis, C. Kosmidis, D. Papadimitriou, G. Abadias, G.A. Evangelakis, *J. Appl. Phys.* **101**, (2007) 124903