

Refereed Publications

1. *Raman and IR study of the effect of Fe substitution in hydro/deutero oxyapatites* Efthymios Liarokapis, Anastasios Antonakos, Andreas Kyriakou, Theodora Leventouri, to be published *American Mineralogist*, **101** (2016).
2. *Dosimetric and radiobiological comparison of CyberKnife M6™ InCise multileaf collimator over IRIS™ variable collimator in prostate stereotactic body radiation therapy*, Vindu Kathriarachchi, Charles Shang, Grant Evans, Theodora Leventouri, and Georgios Kalantzis, *J Med Phys* **41**, 135-143 (2016).
3. *Improvement of the fracture toughness of hydroxyapatite (HAp) by incorporation of carboxyl functionalized single walled carbon nanotubes (CfSWCNTs) and nylon*, S.P. Khanal, H. Mahfuz, A.J. Rondinone, Th. Leventouri, *J Mat Sc Eng C* **60**, 204-10 (2016).
4. *A computational study on different penalty approaches for constrained optimization in radiation therapy treatment planning with a simulated annealing algorithm*, Sadegh Mohamadi, Charles Shang, Zoubir Ouhib, Th. Leventouri, Georgios Kalantzis, 16th IEEE/ACIS International Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/ Distributed Computing (SNPD) June 1-3, 2015, Takamatsu, Japan DOI:10.1109/SNPD.2015.7176174.
5. *Evaluation of surface dose outside the treatment area for five breast cancer irradiation modalities using thermo-luminescent dosimeters*, Suraj P. Khanal, Zoubir Ouhib, Rashmi K Benda, Th. Leventouri, *Intern. J. Cancer Therapy and Oncology*, **3**, 2015 ISSN 2330-4049.
6. *A GPU-based Pencil Beam Algorithm for Dose Calculations in Proton Radiation Therapy*, Georgios Kalantzis, Th. Leventouri, Hidenobu Tachibana, Charles Shang, *Int. J. of Networked and Distributed Computing*, **3** 243-249, 2015 ISSN: 2211-7946.
7. *A computational tool for patient specific dosimetry and radiobiological modeling of selective internal radiation therapy with ⁹⁰Y microspheres*, Georgios Kalantzis, Th. Leventouri, Aditiya Apte, Charles Shang, *Appl. Radiation and Isotopes*, **105**, 123-129, 2015 DOI: 10.1016/j.apradiso.2015.08.009
8. *A Study of Mechanical Behavior and Morphology of Carbon Nanotube Reinforced UHMWPE/Nylon 6 Hybrid Polymer Nanocomposite Fiber*, Mujibur R. Khan, Hassan Mahfuz, Ashfaq Adnan, Theodora Leventouri, and Saheem Absar, *Fibers and Polymers* 2014, **15**, 1484-1492 DOI 10.1007/s12221-014-1484.
9. *Combined x-ray and neutron diffraction Rietveld refinement in iron substituted nano-hydroxyapatite* A. Kyriacou, Th. Leventouri, B. C. Chakoumakos, V. O. Garlea, C. B. dela Cruz, A. J. Rondinone, K. D. Sorge, *J. Mater. Sci.* **48**, 3535-3545 (2013), JM5C7148. DOI: 10.1007/s10853-013-7148-5.
10. *Effect of strain hardening on the elastic properties and normalized velocity of hybrid UHMWPE-nylon 6-SWCNT nanocomposites fiber*, M. R. Khan, H. Mahfuz, Th. Leventouri. *J. Mat. Res.* **27**, 2657-2667 (2012). doi:10.1557/jmr.2012.155

11. *Investigation of MWCNT reinforcement on the strain hardening behavior of Ultra High Molecular Weight Polyethylene (UHMWPE)*, H. Mahfuz, M. R. Khan, Th. Leventouri, E. Liarokapis, J. Nanotechnology (2011), JNT/637395 doi: 10.1155/2011/637395.
12. *Enhancing toughness of LDPE filaments through infusion of MWCNTs and UHMWPE*, M. R. Khan, H. Mahfuz, Th. Leventouri, V. K. Rangari and A. Kyriacou, Polymer Engineering & Science, **51** 654-662 (2011), 2010/DOI: 10.1002/pen.21873.
13. *Crystal structure studies of human dental apatite as a function of age* Th. Leventouri, R. Venturelli, A. Kyriacou, V. Perdikatsis, Intern. J. Biomat. Volume 2009 (2009), Article ID 698547.
14. *Magnetic properties of Fe-Co catalyst particles in vertically aligned carbon nanofibers*, K. D. Sorge, K. L. Klein, A. V. Melechko, C. L. Finkel, O. Malkina, Th. Leventouri, J. D. Fowlkes, P. D. Rack, and M. L. Simpson. J. Appl. Phys., **104**, 033909 1-7 (2008).
15. *Micro-Raman and FTIR Studies of Synthetic and Natural Apatites*, A. Antonakos, E. Liarokapis, Th. Leventouri. J. Biomat. **28**, 3043-3054 (2007).
16. *Synthetic and Biological Hydroxyapatites: Crystal Structure Questions*, Th. Leventouri, J. Biomat. **27**, 3339-3342, (2006). (Leading Opinion Paper, invited).
17. *Magnetic Alloys in Nanoscale Biomaterials*, Th. Leventouri, A. V. Melechko, K. D. Sorge, K. L. Klein, J. D. Fowlkes, P. D. Rack, I. M. Anderson, J. R. Thompson, T. E. McKnight, M. L. Simpson, Trans Met A, **37A**, 3423-3427 (2006).
18. *Mean field approximations for the electronic states in disordered alloys*, J. S. Faulkner, S. Pella, A. Rusanu, Y. Puzyrev, Th. Leventouri, G. M. Stocks, and B. Ujfalussy, Phil. Mag. **86** 2661-2671, (2006).
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20. *Effect of Simulated Body Fluid on the Microstructure of Ferrimagnetic Bioglass Ceramics*, N. Papanearchou, Th. Leventouri A. C. Kis, A. Hotiu, and J. M. Anderson, Mat. Res. Soc. Symp. Proc. **839**, P3.7.1, (2005).
21. *Magnetic and structural properties of ferrimagnetic bioceramics*, A. C. Kis, Th. Leventouri, J. R. Thompson, Mater. Sci. Forum **473**, 117-122, (2005).
22. *Using Computer Simulations to Enhance Teaching the Structure of Materials*, N. I. Papanearchou and Th. Leventouri, Computer Based Learning in Science, Vol. **2**, p. 106-115, (2004).
23. *Neutron powder diffraction studies of silicon substituted hydroxyapatite*, Th. Leventouri, C. E. Bunaciu, V. Perdikatsis, J. Biomat. **24**, 4205-11 (2003).
24. *Pressure effects on the phonon modes and structure of the $A^{\text{II}}B^{\text{III}}_2C^{\text{IV}}_4$ compounds*, E. Liarokapis, Th. Leventouri, A. Tatsi, D. Lampakis, S. A. Lopez-Rivera, L. Martinez. Ongoing.
25. *Processing, Structure and Magnetic Properties of Bioactive, Ferrimagnetic Glass-Ceramics*, Th. Leventouri, A. C. Kis, C. E. Bunaciu, K. Sorge, J. R. Thompson, Mat. Res. Soc. Symp. Proc. **711**, 271 (2002).
26. *A Comparison of Crystal Structure Parameters of Natural and Synthetic Apatites from Neutron Powder Diffraction*, Th. Leventouri, B. C. Chakoumakos, N. Papanearchou, V. Perdikatsis, J. Mat. Res. **16**, 2600-06 (2001).

27. *Crystal Structure Studies of Natural and Synthetic Apatites from Neutron Powder Diffraction*, Th. Leventouri, B. C. Chakoumakos, N. Papanearchou, V. Perdikatsis, Mater. Sci. Forum **378**, 517-22 (2001).
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Book Chapter

Structure Studies of Hydroxyapatite-based Biomaterials, Th. Leventouri, invited by Nova Science Publishers Inc.

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