

UNIVERSITATEA POLITEHNICA DIN BUCUREȘTI

FACULTATEA DE INGINERIE MEDICALA

Departamentul de Bioinginerie si Biotehnologie

Postul: poziția 3 de Conferentiar universitar

Disciplinele Ingineria Implantelor pentru tesuturi moi

Inginerie tisulara

Domeniul de studii universitare Inginerie chimica

Lista completa a publicatiilor

Dr. Mariana Ionita a publicat **45 de articole in jurnale peer reviewed papers** altele 2 sunt inaintate spre publicare sau acceptate spre publicare, are in total **435 de citari** si **h-index 11**. De asemena a publicat 3 capitole de carte si este editor al unei carti si doua teze de doctorat.

A. TEZE DE DOCTORAT

“Abordarea integrată experimentală/computațională pentru studierea permeabilității materialelor polimerice bioartificiale”, Bioinginerie, **2008**, *Universitatea Politehnica din Milano, Italia*

„Metode inovative pentru avansare în sinteza materialelor cu proprietăți controlate și aplicații în procese electrochimice”, Chimie, **2008**, Chimie, *Universitatea Politehnica din Bucuresti, Romania*

B. CĂRȚI ȘI CAPITOLE DE CĂRȚI

i. **Ionita M.**, Crica L., Vlascenu G.M., Iovu H., *An Introduction to Computer Simulation Methods for Biomaterials Design*, – book chapter in: Biomedical Engineering; Introduction to Current Approaches, ISBN 978-606-23-0582-6, **Edited by Mariana Ionita, (2016)**

ii. Anca Hermenean, Sorina Dinescu, **Mariana Ionita**, Marieta Costache, The Impact of Graphene Oxide on Bone Regeneration – book chapter in: Therapies Advanced Techniques in Bone Regeneration, ISBN 978-953-51-2539-6, Edited by Alessandro Rozim Zorzi and Joao Batista de Miranda, **(2016)**

iii. Redaelli A., Soncini M., Vesentini S., Votta E., Deriu M.A., Gautieri A., Fiore G.B., Montecvecchi F.M., Soren E., Aprodu I., **Ionita M.**, Multiscale modelling in biomechanical applications-book chapter in: The Nanomechanics in Italy, Research Signpost, Kerala, India, ISBN 978-81-308-0237-4, Edited by Nicola Pugno, **(2007)** .

ARTICOLE INDEXATE ISI

1. Bayrak, O., **Ionita, M.**, Demirci, E. and Silberschmidt, V.V., 2016. Optical properties of graphene-based materials in transparent polymer matrices. *Applied Physics Letters*, 109(8), p.081905.
2. Crica, L.E., Wengenroth, J., Tiainen, H., **Ionita, M.** and Haugen, H.J., 2016. Enhanced X-ray absorption for micro-CT analysis of low density polymers. *Journal of Biomaterials science, Polymer edition*, 27(9), pp.805-823.
3. Voicu, N.V., Crica, L.E., Pandele, A.M., Damian, C.M., Vasile, E., **Ionita, M.**, 2016. Graphene oxide reinforced gelatin-poly(vinyl alcohol) porous composites for biomedical applications(Article). *Materiale Plastice*, 53(3), pp 399-405
4. **Ionita, M.**, Crica, L.E., Vasile, E., Dinescu, S., Pandele, M.A., Costache, M., Haugen, H.J. and Iovu, H., 2016. Effect of carboxylic acid functionalized graphene on physical-chemical and biological performances of polysulfone porous films. *Polymer*, 92, pp.1-12.
5. Bayrak, O., **Ionita, M.**, Demirci, E. and Silberschmidt, V.V., 2016. Effect of morphological state of graphene on mechanical properties of nanocomposites. *Journal of materials science*, 51(8), pp.4037-4046.
6. **Ionita, M.**, Pandele, A.M., Crica, L.E. and Obreja, A.C., 2016. Preparation and characterization of polysulfone/ammonia-functionalized graphene oxide composite membrane material. *High Performance Polymers*, 28(2), pp.181-188.
7. **Ionita, M.**, Crica, L.E., Voicu, S.I., Pandele, A.M. and Iovu, H., 2016. Fabrication of cellulose triacetate/graphene oxide porous membrane. *Polymers for Advanced Technologies*, 27(3), pp.350-357.
8. **Ionita, M.D.**, Vizireanu, S., Stoica, S.D., **Ionita, M.**, Pandele, A.M., Cucu, A., Stamatina, I., Nistor, L.C. and Dinescu, G., 2016. Functionalization of carbon nanowalls by plasma jet in liquid treatment. *The European Physical Journal D*, 70(2), pp.1-7.
9. Pandele, A.M., **Ionita, M.**, Lungu, A., Vasile, E., Zaharia, C. and Iovu, H., 2017. Porous chitosan/graphene oxide biocomposites for tissue engineering. *Polymer Composites*, 38(2), pp. 363-370.
10. **Ionita, M.**, Crica, L.E., Tiainen, H., Haugen, H.J., Vasile, E., Dinescu, S., Costache, M. and Iovu, H., 2016. Gelatin–poly (vinyl alcohol) porous biocomposites reinforced with graphene oxide as biomaterials. *Journal of Materials Chemistry B*, 4(2), pp.282-291.
11. **Ionita, M.**, Vasile, E., Crica, L.E., Voicu, S.I., Pandele, A.M., Dinescu, S., Predoiu, L., Galateanu, B., Hermenean, A. and Costache, M., 2015. Synthesis, characterization and in vitro studies of polysulfone/graphene oxide composite membranes. *Composites Part B: Engineering*, 72, pp.108-115.
12. Pandele, A.M., **Ionita, M.**, Crica, L., Dinescu, S., Costache, M. and Iovu, H., 2014. Synthesis, characterization, and in vitro studies of graphene oxide/chitosan–polyvinyl alcohol films. *Carbohydrate polymers*, 102, pp.813-820.

13. **Ionita, M.**, Pandele, A.M., Crica, L. and Pilan, L., 2014. Improving the thermal and mechanical properties of polysulfone by incorporation of graphene oxide. *Composites Part B: Engineering*, 59, pp.133-139.
14. Istrate, A., Aprodu, I., Banu, I., Vasile, E., Pilan, L. and **Ionita, M.**, 2014. Single Molecule Level Investigations on Bone Morphogenetic Proteins Binding to Graphene. *Digest J Nanomater Biostructures*, 9, pp.1399-1406.
15. Dinescu, S., **Ionita, M.**, Pandele, A.M., Galateanu, B., Iovu, H., Ardelean, A., Costache, M. and Hermenean, A., 2014. In vitro cytocompatibility evaluation of chitosan/graphene oxide 3D scaffold composites designed for bone tissue engineering. *Bio-medical materials and engineering*, 24(6), pp.2249-2256.
16. Pandele, A.M., Dinescu, S., Costache, M., Vasile, E., Obreja, C., Iovu, H., **Ionita, M.**, 2013, Preparation and in vitro, bulk, and surface investigation of chitosan/graphene oxide composite films, *Polymer Composites*, 34(12), pp 2116-2124
17. Voicu, S.I., Pandele, M.A., Vasile, E., Rughinis, R., Crica, L., Pilan, L. and **Ionita, M.**, 2013. The impact of sonication time through polysulfone-graphene oxide composite films properties. *Digest Journal of Nanomaterials and Biostructures*, 8(4), pp.1389-1394.
18. **Ionita, M.**, Pandele, M.A. and Iovu, H., 2013. Sodium alginate/graphene oxide composite films with enhanced thermal and mechanical properties. *Carbohydrate polymers*, 94(1), pp.339-344.
19. **Ionita, M.**, 2012. Multiscale molecular modeling of SWCNTs/epoxy resin composites mechanical behaviour. *Composites Part B: Engineering*, 43(8), pp.3491-3496.
20. Aprodu, I., Banu, I., Istrate, A., Vasile, E., Pandele, A.M., Vasile, E. and **Ionita, M.**, 2013. Molecular dynamics analysis of bone morphogenetic protein-2 conformations and mechanical properties. *Digest Journal of Nanomaterials & Biostructures*, 8, pp.81-87.
21. Pilan, L., Raicopol, M., Vasile, E. and **Ionita, M.**, 2012. The effect of incorporation of different carbon nanotubes on the properties of polypyrrole nanocomposite—molecular modeling and experimental investigations. *Digest Journal of Nanomaterials and Biostructures*, 7(3), pp.1253-1262.
22. Pilan, L., Raicopol, M., **IONIȚĂ, M.** and Branzoi, V., 2012. Electrochemical Study on Carbon Nanotubes Functionalization by Diazonium Salts Electroreduction. *Rev. Roum. Chim*, 57(9-10), pp.815-822.
23. Raicopol, M., Branzoi, V., Necula, L., **IONIȚĂ, M.** and Pilan, L., 2012. Comparative studies on the redox reaction of $Fe(CN)_6^{4-}$ at modified glassy carbon electrodes via diazonium salts electroreduction. *Rev. Roum. Chim*, 57(9-10), pp.807-814.
24. Raicopol, M., Necula, L., **Ionita, M.** and Pilan, L., 2012. Electrochemical reduction of aryl diazonium salts: a versatile way for carbon nanotubes functionalisation. *Surface and Interface Analysis*, 44(8), pp.1081-1085.
25. **Ionita, M.** and Iovu, H., 2012. Mechanical properties, urea diffusion, and cell cultural response of poly (vinyl alcohol)—Chitosan bioartificial membranes via molecular modelling and experimental investigation. *Composites Part B: Engineering*, 43(5), pp.2464-2470.

26. Pilan, L., Raicopol, M., Damian, C. and **Ionita, M.**, 2012. Electrochemical functionalization of single-walled carbon nanotubes films obtained by electrophoretic deposition. In *Key Engineering Materials* (Vol. 507, pp. 107-111). Trans Tech Publications.
27. Pilan, L., Raicopol, M. and **Ionita, M.**, 2012. Fabrication of polyaniline/carbon nanotubes composites using carbon nanotubes films obtained by electrophoretic deposition. In *Key Engineering Materials* (Vol. 507, pp. 113-117). Trans Tech Publications.
28. **Ionita, M.** and Prună, A., 2011. Polypyrrole/carbon nanotube composites: molecular modeling and experimental investigation as anti-corrosive coating. *Progress in Organic Coatings*, 72(4), pp.647-652.
29. **Ionita, M.**, Ciupina, V. and Vasile E., 2011. Influence of different carbon nanotubes on the mechanical properties of polyaniline nanocomposite - Multiscale molecular modeling. *Journal of Optoelectronics and Advanced Materials*, 13(7), pp.769-775.
30. **Ionita, M.** and Damian, C.M., 2011. Molecular modeling for calculation of mechanical properties of SWCNTs/epoxy composites: Effect of SWCNTs diameter. *Materiale Plastice*, 48(1), pp.54-57.
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32. Gautieri, A., **Ionita, M.**, Silvestri, D., Votta, E., Vesentini, S., Fiore, G.B., Barbani, N., Ciardelli, G. and Redaelli, A., 2010. Computer-aided molecular modeling and experimental validation of water permeability properties in biosynthetic materials. *Journal of Computational and Theoretical Nanoscience*, 7(7), pp.1287-1293.
33. **Ionita, M.** and Branzoi, I.V., 2010. Multiscale Molecular Modeling and Laboratory Investigation of Polypyrrole-polyaniline Composite. *Materiale Plastice*, 47(2), pp.184-188.
34. **Ionita, M.**, Branzoi, I.V. and Pilan, L., 2010. Multiscale Molecular Modeling and Experimental Validation of Polyaniline-CNTs Composite Coatings for Corrosion Protecting. *Surface and Interface Analysis*, 42(6-7), pp.987-990.
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36. Ionita, M., Silvestri, D., Gautieri, A., Votta, E., Ciardelli, G. and Redaelli, A., 2006, January. Molecular Modelling Of Small Molecule Diffusion In Biopolymer Blends Membranes For Biomedical Applications. In *ASME 8th Biennial Conference on Engineering Systems Design and Analysis* (pp. 579-586). American Society of Mechanical Engineers.
37. Ciardelli, G., Silvestri, D., Barbani, N., Ionita, M., Redaelli, A. and Giusti, P., 2006. Bioartificial polymer membranes as innovative systems for biomedical or biotechnological uses. *Desalination*, 200(1-3), pp.493-495.
38. Ionita, M., Silvestri, D., Gautieri, A., Votta, E., Ciardelli, G. and Redaelli, A., 2006. Diffusion of small molecules in bioartificial membranes for clinical use: molecular modelling and laboratory investigation. *Desalination*, 200(1-3), pp.157-159.

39. Ionita, M., Cappelletti, G., Minguzzi, A., Ardizzone, S., Bianchi, C., Rondinini, S. and Vertova, A., 2006. Bulk, surface and morphological features of nanostructured tin oxide by a controlled alkoxide-gel path. *Journal of Nanoparticle Research*, 8(5), pp.653-660.
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42. Brânzoi, V., Pilan, L., Ioniță, M. and Brânzoi, F., 2004. Electropolymerization mechanism and electrochemical properties of polypyrrole film doped with a large anion. *Molecular Crystals and Liquid Crystals*, 416(1), pp.73-83.

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43. **Ioniță, M.**, DONISAN, N. and Brânzoi, I.V., 2010. Modelling mesoscale diffusion processes in a bioartificial membrane. *UPB Sci. Bull., Series B*, 72(1), pp.147-156.
44. PANDELE, A.M., **IONIȚĂ, M.** and IOVU, H., 2014. Molecular modeling of mechanical properties of the chitosan based graphene composites. *UPB Sci Bull Ser B Chem Mater Sci*, 76, pp.107-112.
45. Brânzoi, V., Pilan, L., Gautieri, A., Prună, A. and **Ioniță, M.**, 2007. Innovative Methods To Advance In New Materials Design; Electrochemical Behaviour Of Polyaniline-Polypyrrole Composite Coatings Obtained By Electrosynthesis. *UPB Sci Bull Ser B Chem Mater Sci*, 69(2), pp.21-34.