

Biomaterials, Medical Devices, and Regenerative Medicine Laboratory

Publications

2014:

- *Injectable chitosan microparticles incorporating bone morphogenetic protein-7 for bone tissue regeneration.*
Mantripragada VP, Jayasuriya AC. J Biomed Mater Res A. 2014 Feb 4. doi: 10.1002/jbm.a.35100. PMID: 24497318 [Epub ahead of print]
Link: <http://www.ncbi.nlm.nih.gov/pubmed/24497318>
- *The effect of graphene substrate on osteoblast cell adhesion and proliferation.*
Aryaei A, Jayatissa AH, Jayasuriya AC. J Biomed Mater Res A. 2013 102(9):3282-90. doi: 10.1002/jbm.a.34993. Epub 2013 Nov 1. PMID: 24178155.
Link: <http://www.ncbi.nlm.nih.gov/pubmed/24178155>
- *Mechanical and biological properties of chitosan/carbon nanotube nanocomposite films.*
Aryaei A, Jayatissa AH, Jayasuriya AC. J Biomed Mater Res A. 2013 102(8):2704-12. doi: 10.1002/jbm.a.34942. Epub 2013 Sep 24. PMID: 24108584.
Link: <http://www.ncbi.nlm.nih.gov/pubmed/24108584>
- *IGF-1 Release Kinetics and Osteoblast function of Chitosan Microparticles Fabricated Using Environmentally Benign Conditions.*
V. P. Mantripragada, A. C. Jayasuriya. Mat Sci Eng C Mater Biol Appl. (Accepted).

Submitted:

- *Mechanical properties of calcium phosphate-chitosan composites.*
J. Liu, A. Aryaei, A. C. Jayasuriya (In review)
- *Current wound healing procedures and potential care.*
M. Dreifke, A. A. Jayasuriya, A. C. Jayasuriya (In review)
- *The effect of oscillatory mechanical stimulation on osteoblast attachment and proliferation.*
Aryaei, A. C. Jayasuriya (In review)
- *Biocompatible chitosan bone graft substitute to promote bone healing and prevent infection during bone fractures.*
V. P. Mantripragada, A. C. Jayasuriya (In review)
- *In vivo bone formation analysis using injectable chitosan microparticles in a rat model.*
V. P. Mantripragada, A. C. Jayasuriya (In review)

2013:

- *ZnO nanoparticles induced effects on nanomechanical behavior and cell viability of chitosan films.*

Jayasuriya AC, Aryaei A, Jayatissa AH. Mater Sci Eng C Mater Biol Appl. 2013 Oct;33(7):3688-96. doi: 10.1016/j.msec.2013.04.057. PMID: 23910265
Epub 2013 May 4.
Link: <http://www.ncbi.nlm.nih.gov/pubmed/23910265>

- *An overview of recent advances in designing orthopedic and craniofacial implants.*
Mantripragada VP, Lecka-Czernik B, Ebraheim NA, Jayasuriya AC. J Biomed Mater Res A. 2013 Nov;101(11):3349-64. doi: 10.1002/jbm.a.34605. Epub 2013 Jun 14. Review.
PMID: 23766134
Link: <http://www.ncbi.nlm.nih.gov/pubmed/23766134>
- *Mechanical properties of human amniotic fluid stem cells using nanoindentation.*
Aryaei A, Jayasuriya AC. J Biomech. 2013 May 31;46(9):1524-30. doi: 10.1016/j.jbiomech.2013.03.023.
PMID: 23628151
Link: <http://www.ncbi.nlm.nih.gov/pubmed/23628151>
- *Secretion of growth factors from macrophages when cultured with microparticles.*
Bhat A, Wooten RM, Jayasuriya AC. J Biomed Mater Res A. 2013 Nov;101(11):3170-80. doi: 10.1002/jbm.a.34604. Epub 2013 Apr 2. PMID: 23554098
Link: <http://www.ncbi.nlm.nih.gov/pubmed/23554098>
- *Investigation of potential injectable polymeric biomaterials for bone regeneration.*
Dreifke MB, Ebraheim NA, Jayasuriya AC. J Biomed Mater Res A. 2013 Aug;101(8):2436-47. doi: 10.1002/jbm.a.34521. Epub 2013 Feb 11. Review. PMID: 23401336
Link: <http://www.ncbi.nlm.nih.gov/pubmed/23401336>
- *Controlled release behavior of cisplatin encapsulated poly(lactic-co-glycolic acid) nanoparticles.*
A. C. Jayasuriya, A. Darr. Journal of Biomedical Science and Engineering 6, 586-592. 2013.
Link: <http://dx.doi.org/10.4236/jbise.2013.65074>

2012:

- *Nano and micro mechanical properties of uncross-linked and cross-linked chitosan films.* Aryaei A, Jayatissa AH, Jayasuriya AC. J Mech Behav Biomed Mater. 2012 Jan;5(1):82-9. doi: 10.1016/j.jmbbm.2011.08.006. Epub 2011 Aug 24. PMID: 22100082
Link: <http://www.ncbi.nlm.nih.gov/pubmed/22100082>
- *Fabrication and Characterization of Injectable Biomaterials for Biomedical Applications.*
Jayasuriya AC, Mauch KJ, Ebraheim NA. Advanced Materials Research: 383-390: 4065-4069, 2012.
Link: <http://www.scientific.net/AMR.383-390.4065>

2011:

- *In vitro degradation behavior of chitosan based hybrid microparticles.*
Jayasuriya AC, Mauch KJ, Journal of Biomedical Science and Engineering 4(5):383-390, 2011.
Link: file:///C:/Users/ajayasuriya/Downloads/JBiSE20110500003_94835711.pdf

2010:

- *Evaluation of cross-linked chitosan microparticles for bone regeneration.*
Bhat A, Dreifke MB, Kandimalla Y, Gomez C, Ebraheim NA, Jayasuriya AC. J Tissue Eng Regen Med. 2010;4(7):532-42. doi: 10.1002/term.270. PMID: 20872740
Link: <http://www.ncbi.nlm.nih.gov/pubmed/20872740>
- *Fabrication and characterization of novel hybrid organic/inorganic microparticles to apply in bone regeneration.*
Jayasuriya AC, Bhat A. J Biomed Mater Res A. 2010;93(4):1280-8. doi: 10.1002/jbm.a.32623. PMID: 19827109
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- *Rapid biomineralization of chitosan microparticles to apply in bone regeneration.*
Jayasuriya AC, Kibbe S. J Mater Sci Mater Med. 2010 Feb;21(2):393-8. doi: 10.1007/s10856-009-3874-2. Epub 2009 Sep 16. PMID: 19756963
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2009:

- *Optimization of scaled-up chitosan microparticles for bone regeneration.*
Jayasuriya AC, Bhat A. Biomed Mater. 2009 Oct;4(5):055006. doi: 10.1088/1748-6041/4/5/055006. Epub 2009 Sep 25. PMID: 19779252
- *Evaluation of Bone Matrix and Demineralized Bone Matrix Incorporated PLGA Matrices for Bone Repair.*
Jayasuriya AC, Ebraheim NA. Journal of Materials Science: Materials in Medicine, 20 (8), 1637-1644, 2009.
Link: <http://link.springer.com/article/10.1007/s10856-009-3738-9>
- *Fabrication of cuprous and cupric oxide thin films by heat treatment.*
A. H. Jayatissa, K. Guo, A. C. Jayasuriya. Applied Surface Science 255(23): 9474-9479, 2009.
Link: <http://www.sciencedirect.com/science/article/pii/S0169433209010770>
- *Spin coating of transparent zinc oxide films using novel precursor.*
A. H. Jayatissa, K. Guo, T. Gupta, A. C. Jayasuriya. Journal of Materials Science-Materials in Electronics 20(6), 577-581, 2009.
Link: <http://link.springer.com/article/10.1007/s10854-008-9768-0>

2008 and Beyond

- *Acceleration of biomimetic mineralization to apply in bone regeneration.*
Jayasuriya AC, Shah C, Ebraheim NA, Jayatissa AH. Biomed Mater. 2008 Mar;3(1):015003. doi: 10.1088/1748-6041/3/1/015003. Epub 2007 Dec 19. PMID: 18458490
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- *Controlled release of insulin-like growth factor-1 and bone marrow stromal cell function of bone-like mineral layer-coated poly(lactic-co-glycolic acid) scaffolds.*
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- *Point of View.*
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- *Effect of ionic activity products on the structure and composition of mineral self assembled on three-dimensional poly(lactide-co-glycolide) scaffolds.*
Shin K, Jayasuriya AC, Kohn DH.
J Biomed Mater Res A. 2007 Dec 15;83(4):1076-86. PMID: 17584901
Link: <http://onlinelibrary.wiley.com/doi/10.1002/jbm.a.31437/full>
- *Fabrication of Nanocrystalline Cobalt Oxide via Sol-gel Coating.*
Jayatissa AH, Guo K, Jayasuriya AC. Materials Science and Technology B, 144, 69-72, 2007.
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- *Dissolution Behavior of Biomimetic Minerals on 3D PLGA Scaffold.*
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- *Preparation of ZnO films in sol-gel method using novel monomers.*
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- *Piezoelectric and mechanical properties in bovine cornea.*
Jayasuriya AC, Scheinbeim JI, Lubkin V, Bennett G, Kramer P.
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- *A study of piezoelectric and mechanical anisotropies of the human cornea.*
Jayasuriya AC, Ghosh S, Scheinbeim JI, Lubkin V, Bennett G, Kramer P.
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- *Crystal-structure dependence of electroactive properties in differently prepared poly (vinylidene fluoride/hexafluoropropylene) copolymer films.*
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- *Ferroelectric behavior in solvent cast poly (vinylidene fluoride/hexafluoropropylene) copolymer films.*
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Link: <http://www.sciencedirect.com/science/article/pii/S0169433201001301>
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- *Ferroelectric and Optical Properties of Aromatic Polyurethanes.*
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- *Ferroelectric Behavior in Fluoro-Nylons.*
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