

Amir Seyfoori

Breast cancer Research center
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EDUCATION:

2013- present:

PhD student in Materials Science and Engineering, College of Engineering, University of Tehran.

- Thesis title: CTCs isolation and 3D culturing using magnetic assisted smart microfluidic systems.
- Supervisor: Prof. Seyed Ali SeyedEbrahimi

2009- 2012:

MSc in Biomedical Engineering, Biomaterials, University of Science & Technology (IUST).

- Thesis title: corrosion rate and biocompatibility assessments of MAO/EPD derived nanocomposite coatings on magnesium orthopedic implants.
- Supervisor: Prof. Sh. Mirdamadi, M.A shokgozar

2005-2009:

& Research.

BSc in Materials Science and Engineering, University of Science

- Thesis title: Heat Treatment of a novel cast irons for biomedical applications.
- Supervisor: Prof. Sh. Mirdamad

Research Interests:

- 3D cell culturing methods using microfluidic platforms.
- Bioengineering in-vitro tumor modeling using lab on chip technologies.
- Bio-microparticle isolations and detections using magnetic nanotechnologies.
- 3D printing technologies in microfluidics and tissue engineering.
- Local drug delivery using nanocarriers.

Research Experiences:

2014- present:

Research Assistant
Breast Cancer Research Center, ACECR
Biomaterials and Tissue engineering in cancer group

2013- present:

Research Assistant

Department of Metallurgy and Materials Engineering,
Advanced Magnetic Materials Research Center

2012-2014: Research Assistant
Baqyatallah University of Medical Sciences, Applied
Biotechnology Research Center, Tissue Engineering division

2014-2015: Research Assistant
Baqyatallah University of Medical Sciences, Applied
Microbiology Research Center

Teaching Experiences:

2012- 2014: Lecturer in Payam Noor University, Biomedical Engineering group

- Introduction to polymeric biomaterials
- Introduction to metallic biomaterials

Invited Speaker:

- 1- 6th international conference of breast cancer, Circulating Tumor Cell Isolation: Opportunities and Challenges, Breast Cancer Research Center, 2015, Tehran, Iran.
- 2- 1st national congress of sarcoma, Applications of 3D printing in bone grafts substitutes, 2016, Tehran. Iran.
- 3- 2nd interdisciplinary seminar of breast cancer institute, Applications of novel microfabrication techniques in biotechnology, 2016, Tehran, Iran.

Publications:

Books:

- 1- M.R. Naimi jamal, J. Moradian, Sh. Honarvar, K. Asgharpour, **A. Seyfoori**, Introduction and applications of polymers in biomedical engineering, published by IUST press center, 2013, ISBN: 978-964-454-269-5
- 2- **Amir Seyfoori**, Mehdi RahmanianKoshkaki, KeivanMajidzadeh-A, “Nano-hybrid stimuli responsive microgels: a new pathway in cancer therapy”, EditorAlexandru Mihai Grumezescu ,Nanoarchitectonics for Smart Delivery and Drug Targeting, Elsevier publications, In press.

Journal Articles:

Under preparations

- 1- **Amir Seyfoori**, Mahdi RezayatiCharan, Leyla Farahmand, Mehdi RahmanianKooshkaki , Rezvan Esmailie, Seyyed Ali Seyed Ebrahimi, Mohsen Akbari, *High fatality cancer engineering: from diagnosis to treatment*, Review article.

- 2- Mehdi RahmanianKooshkaki, **Amir Seyfoori**, Mahdi RezayatiCharan, Keivan Majidzadeh-A, Amir Sanatinezhad , Tumor Modeling for Multi-Drug Delivery, Review article.
- 3- Hassan Pezeshki Modarres, Mohsen Janmaleki, Mana Novin, Hasan Anwarul, Hamid Sadabadi, Mahdi RezayatiCharan, **Amir Seyfoori**, Amir Sanati Nezhad' *Current and Perspective Technologies for Biomimetic Modeling of Drug Delivery Across Blood Brain Barrier* , Review article.

Submitted

- 1- Bisphosphonate eluted Zn-Mg doped hydroxyapatite nanoparticles synthesized by Microwave-assisted method, Materials Science and Engineering C.
- 2- Mechanical Alloying and Characterization of Cu₇₀Ti₂₀Ni₁₀ and Cu₇₀Ti₂₀Ni₁₀ Alumina Nanocomposite, Journal of Alloys and Compounds.
- 3- Combustion and co-precipitation synthesis of Co-Zn Ferrite nanoparticles: Comparison of structure and magnetic properties, International Journal of Applied Ceramic Technology.

2013

- 4- **Amir Seyfoori**, Hamideh Mahmoodzadeh Hosseini, Abbas Ali Imani Fooladi, Mohammad Reza Nourani, Synthesize and characterization of hollow hydroxyapatite nanopowders with different morphologies: role of cationic and non-ionic surfactants, 2013, Adv. Mat. Res., 829, 268-273
- 5- **A. Seyfoori**, Sh. Mirdamadi, Z.S. Seyedraoufi, A. Khavandi, M. Aliofkhaezrai, Synthesis of biphasic calcium phosphate containing nanostructured films by micro arc oxidation on magnesium alloy, 2013, Mat. Chem. Phys., 142, 87-94.
- 6- **A. Seyfoori**, Sh. Mirdamadia, M. Mehrjoob, A. Khavandia In-vitro assessments of micro arc oxidized ceramic films on AZ31 magnesium implant: Degradation and cell-surface response, 2012, Progress in Natural Science, 23, 425-433.

2012

- 7- **A. Seyfoori**, Sh. Mirdamadi, A. Khavandi, Z. Seyed Raufi, Biodegradation behavior of micro-arc oxidized AZ31 magnesium alloys formed in two different electrolytes, 2012, Appl. Surf. Sci., 261, 92-100.
- 8- Mehdi Rahmanian Koshkaki , Hossein Ghassai, Alireza Khavandi, **Amir Seyfoori**, Alireza Molazemhosseini, Effect of formaldehyde solution and nanoparticles on mechanical properties and degradation of gelatin/nano TCP scaffolds, 2012, Iran. Poly. J., 22, 653-664.

Conference articles:

- 9- **A. Seyfoori**, M.R. Charan, M. Rahmanian, K. Majidzadeh. A, 3D printed microfluidic channels with potential application of on-chip bio-microparticles isolation, 1st conference of

applications of microfluidics in medicine and engineering. 2016. Tehran, Iran.

- 10- A. Yusefi, **A. Seyfoori**, S.A. Seyyed Ebrahimi, Hyperthermia effect of maghemite nanoparticles with two morphologies, 1st national congress of integrative oncology, 2016. Tehran, Iran.
- 11- **A.Seyfoori**, Sh. Mirdamadi, A. Khavandi, Synthesize and characterization of hollow hydroxyapatite nanopowders with different morphologies: role of cationic and non-ionic surfactants, UFGNSM conference, 2013, Tehran, Iran.
- 12- **A.Seyfoori**, Sh. Mirdamadi, A. Khavandi, In-vitro assessments of plasma-anodized AZ31 magnesium alloy for orthopedic implant applications, Swiss Society of Biomaterials (SSB), 2012.
- 13- **A. Seyfoori**, Sh. Mirdamadi, A. Khavandi, Investigation of micro arc oxidized films on AZ31 magnesium alloys in different electrolyte, 7th annual electrochemical conference, 2011, Tehran, Iran.

Research grants:

- 1- Research grant from Canadian Cancer Society Research Institute (CCSRI), **submitted**.
 - Multidimensional Separation, Isolation and Characterization of Colorectal Cancer Cells
- 2- Research grant from Baqyatallah University of Medical Sciences, Applied Biotechnology Research Center. 2012
 - Fabrication of nHAp/Gel/Chi nanocomposite scaffolds with sustainable drug release in bone tissue engineering applications.
- 3- Research grant from Baqyatallah University of Medical Sciences, Applied Microbiology Research Center. 2014
 - Fabrication of Antibiotic loaded calcium phosphate granules for localized treatment of osteomyelitis.

References:

- 1- **Seyyed Ali Seyyed Ebrahimi**
 - Professor of Materials science, School of Metallurgy and Materials engineering, University of Tehran, Iran.
 - Dean of Advanced Magnetic Materials Research Center.
Email: saseyyed@ut.ac.ir
- 2- **Keyvan Majidzadeh-A**
 - Dean of Breast Cancer Research Center, ACECR
Email: kmajidzadeh@razi.tums.ac.ir