

Curriculum Vitae - Hossein Amini Mashhadi, PhD

Hossein Amini Mashhadi, PhD

Assistant Professor, Department of Materials Engineering

Iranian Academic Center for Education, Culture & Research (ACECR), Mashhad, Iran

E-mail: amir_hie@yahoo.com, mashhadi@acecr.ac.ir

Tel: +98-51-31997181

Fax: +98-51-31997180

Mobile: + 98 915 515 1706

➤ Qualifications

- 2012 PhD in New Frontier Sciences and Nano materials, Kumamoto University, Kumamoto, Japan. Dissertation: “*Mechanochemical Synthesis and Shock Consolidation of Nanostructured Composite of Ti-Al-N Ternary System*”.
- 2001 MSc in Design and Selection of Engineering Materials, Iran University of Science and Technology (IUST), Tehran, Iran.
- 1999 BSc in Materials Science and Engineering, Ferdowsi University of Mashhad, Mashhad, Iran.

➤ Career Summary

Being the vice chancellor of academic affairs, assistant professor and materials engineering group member has given me the experience of broad administrative roles, course coordinating, conducting research and teaching.

➤ Employment History

- 2013 - Present Vice chancellor of academic affairs, ACECR, Khorasan-e-Razavi Branch, Iran.
- 2011 - Present Assistant Professor, Department of Materials Engineering, University of Applied Science and Technology affiliated with ACECR, Iran.
- 2005 - Present Member of the Materials Engineering research group, ACECR, Mashhad, Iran.
- 2005 - 2009 Lecturer, Azad University, Neyshabur Branch, Iran.

➤ Awards and Scholarships

- 2011 Kumamoto University Graduate School Doctoral Course Scholarship Program (KDS).
- 2009 ACECR Scholarship for overseas PhD program.

Curriculum Vitae - Hossein Amini Mashhadi, PhD

- 2001 Ranked 1st in MSc graduating class

➤ Teaching Experiences

- 2002-2009/2011- 2017 Metallography Lab., Heat treatment of metals and alloys, Principles of Metals Casting, Phase Transformation in Metals and Alloys, Powder Metallurgy, Principles of Materials Science and Engineering at University of Applied Science and Technology and Azad University.
- 2009-2011 Mentoring two MSc students during my PhD Course in Japan.
- Supervision over 20 MSc and BSc Thesis

➤ Seminars

1. A. Salehi, S. Nokhasteh, H. AminiMashhadi, F. Barzgar, M.S. Abravi, "Investigation of morphological and biocompatibility of titanium scaffolds produced by powder metallurgy technique", (in Persian), 5th International Conference on Materials Engineering and Metallurgy (iMAT 2016), Shiraz, Iran 8-9 November 2016.
2. H. AminiMashhadi, N. Wada, S. Tanaka, K.Hokamoto. "Underwater shock compaction of nanocrystalline Al-AlN/TiN composite of reactively milled powders", 4th International Symposium on Energetic Materials and their applications (ISEM2011), 16-18 Nov. 2011, Naha, Okinawa, Japan. "The Excellent Young Scientist Award"
3. H. AminiMashhadi, Ivan Bataev, Kazuyuki Hokamoto, "Mechanochemical synthesis of nanostructured TiN(Al) solid solution", International Conference on Material Sciences and Technology (MST 2011), 28-30 Oct. 2011, Shanghai, China.
4. M. Golestanipour, M.S. Abravi, M. MalekJafarian, H. AminiMashhadi, "Effects of strain rate and density on the bending properties of Al/SiCp composite foams" 7th International Conference on Porous Metals and Metallic Foams (MetFoam 2011), 18-21 September 2011, Busan, Korea.
5. Hossein AminiMashhadi, Ivan Bataev, Kazuyuki Hokamoto, "Dynamic compaction of mechano-synthesis TiN(Al) nanostructured solid solution", International COE Forum on Pulsed Power Engineering and Young Researcher Training Camp, Sep 11-13, 2011, Aso, Japan.
6. Hossein AminiMashhadi, S. Tanaka, Kazuyuki Hokamoto, "Effect of aluminum content on the in-situ synthesis of nanocrystalline TiN particles in Al-Ti-AlN composite by mechanical alloying" The International Conference for Nanomaterials Synthesis and characterization 2011 (INSC 2011), 4-5 July 2011, Selangor, Malaysia.
7. H. AminiMashhadi, P. Manikandan, G. Kennedy, R. Tomoshige, K. Hokamoto; "AlN-TiN Ceramic Nanocomposite Formation by Reactive Milling and Shock Compaction method", 3rd International Congress on Ceramics (ICC3), Nov. 14-18, 2010, Osaka, Japan.
8. H. AminiMashhadi, P. Manikandan, I. Farahbakhsh, K. Hokamoto, "Fabrication of bulk AlN/TiN nanocomposite by mechanical alloying and underwater shock compaction", International COE Forum on pulsed power engineering & young researcher training camp, 27-29 Sep. 2010, Kagoshima, Japan.
9. H.AminiMashhadi, P. Manikandan, S. Miyoshi, K. Hokamoto, "Exchange reaction milling in AlN and Ti", 160th Iron & steel Institute of Japan (ISIJ) meeting, 24-26 Sep. 2010, Sapporo, Japan.

➤ **Research Experiences**

- 2019 Principal investigator (PI) of research project entitled: "Localization of porous dental implants" Funded by Mashhad branch of ACECR.
- 2012 Principal investigator (PI) of research project entitled: "Manufacturing of hydroxyapatite coated porous titanium implants for medical application" Funded by Mashhad branch of ACECR.
- 2012 Principal investigator (PI) of research project entitled: "Application of Nano Biomaterials in Medicine" Funded by Mashhad branch of ACECR.
- 2008 Principal investigator (PI) of research project entitled: "Manufacturing of Aluminum Foams by casting method" Funded by Mashhad branch of ACECR.
- 2007 Principal investigator (PI) of research project entitled: "Study and Modification of Al/Al₂O₃p Composite Microstructure by Evaporative Pattern Casting" Funded by Azad University, Neyshabur Branch.
- 2006 Principal investigator (PI) of research project entitled: "Selection of the Optimum Method to Recycling of Fine Aluminum Scraps" Funded by Central office of ACECR.
- 2004 Principal investigator (PI) of research project entitled: "Reduction of Sangan Iron ore pellets in fixed bed of Tabas region non-coking coal" Funded by Central office of ACECR.
- Peer reviewing of several research articles, research reports, theses and research proposals.

➤ **Publications**

• **Books**

H. Amimi Mashhadi, S. Nokhasteh, AM. Molavi, A. Salehi, "Engineering and Application of Biomaterials in Medicine", ACECR Publication, Amirkabir University of Technology Branch, "in Farsi", December 2017.

• **Journal Articles**

1. A. Salehi, F. Barzegar, **H. Amini Mashhadi**, Samira Nokhasteh, M. S. Abravi, "Influence of pore characteristic on electrochemical and biological behavior of Ti foams", Journal of Materials Research and Performance, Vol. 26, Issue 8, pp. 3756-3766, 2017.
2. A. Salehi, **H. Amini Mashhadi**, M. S. Abravi, HR. Jafarian, "An ultrasoundassisted method on the formation of nanocrystalline fluorohydroxyapatite coatings on titanium scaffold by dip coating process", Procedia Materials Science, Vol. 11, pp. 137-141, 2015.
3. **H. Amini Mashhadi**, I. Bataev, B. Mohammad Sadeghi, K.Hokamoto, "Mechanochemical synthesis and shock wave consolidation of TiN(Al) nanostructure solid solution", Materials Chemistry and Physics, Vol. 145, pp.366-375, 2014.
4. **H. Amini Mashhadi**, I. Bataev, S. Tanaka, R. Tomoshige, K.Hokamoto, "On the mechanochemical activated synthesis of nanocrystalline in-situ Ti(Al)N", International Journal of Refractory Metals and Hard Materials, Vol. 30, pp. 25-32, 2012.
5. **H. Amini Mashhadi**, N. Wada, R. Tomoshige, P. Manikandan, K.Hokamoto, "Fabrication of bulk AlN-TiN nanocomposite by reactive ball milling and underwater shock consolidation technique", Journal of Ceramics International. Vol. 37, Issue 6, pp. 1747-1754, Feb. 2011.

Curriculum Vitae - Hossein Amini Mashhadi, PhD

6. M.Golestanipour, **H.Amini Mashhadi**, M.S. Abravi, M.M. Malekjafarian, M.H. Sadeghian. "Manufacturing of Al/SiCp composite foams using calcium carbonate as foaming agent", Materials Science and Technology, Vol. 27, No. 5, pp. 923-927, May 2011.
7. A. Moloodi, **H. Amini**, E. Z. Karimi, M.Golestanipour, "On the role of both salt flux and cold pressing on physical and mechanical properties of aluminum alloy scraps", Materials and Manufacturing Processes, Vol. 26, Issue 9, pp 1207-1212, 2011.
8. **H. AminiMashhadi**, G. Kennedy, S. Tanaka, K.Hokamoto, "Effect of aluminium content on the mechanochemical synthesis of in situ TiN in the Al-Ti-AlN system for shock consolidation", Physica B: Physics of Condensed matter. Vol. 406, Issues 6-7, pp. 1211-1221, Dec. 2010.
9. **H.Amini Mashhadi**, P.Manikandan, R.Suetsugo, S. Tanaka, K.Hokamoto, "An assessment on the synthesis of AlN-TiN nanocomposite powder by reactive ball milling and subsequent thermal treatment", Journal of Alloys and Compounds. Volume 506, Issue 2, pp. 653-660, Sep. 2010.
10. **H. Amini**, A. Moloodi, M. Golestanipour, E.Z.V. Karimi, "Recycling of aluminum alloy turning scrap via cold pressing and melting with salt flux", Journal of Materials Processing Technology, Volume 209, Issue 7, pp. 3138-3142, April 2009.
11. **H. Amini**, A. Rastgoo, J. Vahdati, "An Investigation on the Reduction of Iron Ore Pellets in Fixed Bed of Domestic Non –Coking Coals", International Journal of Iron and Steel Society of Iran, Vol. 5, No.1, pp.8-14, August 2008.
12. Haerian, A., Vahdati, j., **Amini, H.**, "Effect of Composition and MnS Addition on Microstructure and Mechanical Properties of Powder Forged Copper Steel Parts", International Journal of Engineering (IJE), Vol. 17, No. 1, pp.81-94, April 2004.

• Conference Proceedings

1. A. Salehi, H. AminiMashhadi, M.S. Abravi , F. Barzgar, S.Nokhasteh, M.Mahdavi Shahri, "Mechanical evaluation of titanium scaffolds for orthopedic implants", 10th International Conference on Porous Metals and Metallic Foams (MetFoam 2017), 14-17 September 2017, Nanjing, China.
2. A. Salehi, S. Nokhasteh, M.S. Abravi, H. AminiMashhadi, F. Barzegar, A. Moloodi "The response of osteoblasts to nanocrystalline coated fluorohydroxyapatite thin films on Ti scaffolds", 6th International Conference on Nanostructures (ICNS6), Kish Island, Iran, 7-10 March 2016.
3. A. Salehi, M.S. Abravi, H. AminiMashhadi, "Using powder metallurgy technique on the manufacturing Ti scaffolds with different cell sizes and evaluation of their properties", 4th International Engineering Materials & Metallurgy, Tehran, Iran, Nov. 10-11, 2015.
4. M. Salehi, M. S. Abravi, H. Amini Mashhadi, "On the manufacturing of porous titanium scaffolds used in orthopedic implants and evaluation of their mechanical properties", 8th Congress and 3rd international Engineering Materials and Metallurgy, Tehran, Iran, Nov. 18-19, 2014.
5. M. Malekjafarian, M. S. Abravi, M. Golestanipour, A. Sadeghi, H. Amini Mashhadi, A. Babakhani, "Effect of SiC on microstructural features and compressive properties of aluminum foam" International Conference on Cellular Materials (Cellmate 12), Dresden, Germany, Nov. 7-9, 2012.

Curriculum Vitae - Hossein Amini Mashhadi, PhD

6. H.AminiMashhadi, N.Wada, P.Manikandan, S. Miyoshi, S. Tanaka, K.Hokamoto, "Reaction synthesis of AlN-TiN nanocomposite by underwater shock compaction method", International Symposium on Explosion, Shock wave and High-energy reaction Phenomena 2010 (3rd ESHP Symposium), 1-3 Sep. 2010, Seoul National University, Seoul, Korea.
7. H.AminiMashhadi, P.Manikandan, R.Suetsugo, K.Hokamoto, "Synthesis of nanocrystalline TiN by mechanochemical method", The 4th International Student Conference on Advanced Science and Technology (ICAST), 25-26 May 2010, Ege University, İzmir, Turkey.
8. H.AminiMashhadi, P.Manikandan, R.Suetsugo, K.Hokamoto, "Synthesis of AlN-TiN nanocomposite powder by reactive ball milling and subsequent shock consolidation", The 5th Academic Society of Iranian in Japan (ASIJ) conference, 6 March 2010, Tokyo, Japan.
9. Rastgoo, J. Vahdati, H. Amini, "Reduction of Magnetite Sangan Iron ore pellets in fixed bed of Tabas region non-coking coal," (in Persian), 10th Annual congress of Iranian Metallurgical Engineer's Society, Ferdowsi University of Mashhad, Nov. 2006.
10. H. Amini, A.Haerian, J.Vahdati, "Effect of Composition & Microstructure on Mechanical Properties of Powder Forged Copper Steel Parts," PM2Tech 2005 International Conference on Powder Metallurgy & Particulate materials, Montreal, Canada, June, 2005.
11. I. Farahbakhsh, A. Zakeri, P. Manikandan, H.AminiMashhadi, S. Tanaka, K. Hokamoto, "Synthesis of Ni-Cu coating layer on milling balls using planetary high-energy ball mill", International Symposium on Explosion, Shock wave and High-energy reaction Phenomena 2010 (3rd ESHP Symposium), 1-3 Sep. 2010, Seoul National University, Seoul, Korea.
12. A. Moloodi, R. Raiszadeh, H. Amini, M.S. Abravi, "Recycling of aluminum turning scraps to metal foams via SDP", The 6th International conference on porous metals and metallic foams, 1-4 September 2009, Bratislava, Slovakia.
13. Ahmad Moloodi, Hossein Amini , "On the role of both salt flux and cold pressing on physical and mechanical properties of aluminum alloy scraps" 14th International metallurgy and materials congress, IMMC 2008, 16-18 October 2008, Istanbul, Turkey.
14. H. Amini, M. Golestanipour, M. H. Sadeghian, V. Dehnavi, "Influence of Al/Al₂O₃ particles on the properties of heat treated Al based composites produced by EPC method," 2008 CSME Conference, University of Ottawa, Ottawa, Ontario, Canada, 5 – 8 June 2008.
15. V. Dehnavi, M. Makarem, H. Amini, "Effect of Warm Compaction on Pore Geometry and Distribution," 5th International Conference on Powder Metallurgy for Automotive Parts, Isfahan, Iran, 6-8 Apr. 2008.
16. Haerian, A., Vahdati, J., Amini, H., "Effect of MnS on Mechanical Properties of Powder Forged Copper Steel Parts," PM02- International Conference on Powder Metallurgy for Automotive Component, India. 2002.

• **Patents**

The process of Recycling Industrial Scraps into Metallic Foam, Iranian patent office, patent No. 52539, 2008.

Manufacturing of close cell aluminum foams using calcium carbonate as foaming, Iranian patent office, patent No. 62573, 2009.

➤ **Professional Membership**

- 2018-present Faculty recruitment committee member at the Central Office of ACECR, Iran
- 2017-present Development and Supervision Council Member of Educational Centers at ACECR, Iran.
- 2013-present Executive Secretary of Promotion Commission at ACECR, Khorasan-e-Razavi Branch, Iran.
- 2006-present Technical Committee Member of Metallurgical Engineering at the Central Office of ACECR, Tehran, Iran.