

Vahid Fahimpour

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Educational Background:

M.Sc.: Materials Science and Engineering (Extractive Metallurgy), Sharif University of Technology [ranked 1st in Iran], GPA: 18.05/20 (2009-2011);

B.Sc.: Materials Science and Engineering (Industrial Metallurgy), Isfahan University of Technology [ranked 4st in Iran], GPA: 14.93/20 (2005-2009);

Diploma: Physics and Mathematics in Reza Vaseghi high school, GPA: 18.66/20.

Publications:

- 1. V. Fahimpour, S.K. Sadrnezhaad and F. Karimzadeh, Microstructure and mechanical property change during FSW and GTAW welding of Al6061 alloy, *Metallurgical and Materials Transactions A* 44 (2013) 2187-2195.
- 2. V. Fahimpour and S.K. Sadrnezhaad, Magnesium nanopowder for hydrogen absorption and ammonium perchlorate decomposition, *Materials Letters* 85 (2012) 128-131.
- **3**. V. Fahimpour, S.K. Sadrnezhaad and F. Karimzadeh, Corrosion behavior of aluminum 6061 alloy joined by friction stir welding and gas tungsten arc welding methods, *Materials and Design* 39 (2012) 329–333.
- **4**. V. Fahimpour and S.K. Sadrnezhaad, Breakage mechanism during ball milling of Mg for nanopowder production (*Under review with International Journal of Mineral Processing*).
- **5**. V. Fahimpour and S.K. Sadrnezhaad, Synthesis and characterization of magnesium nanoparticles, *5th Joint Conference of Iranian Metallurgical Engineers Society and Iranian Foundry men's Society*, Iran, 2011.
- **6**. V. Fahimpour and S.K. Sadrnezhaad, Effect of magnesium nanoparticles on ammonium perchlorate activation, *The 1th conference of Iranian Aircraft Structure Integrity Program*, Iran, 2011.

Research Projects:

M.Sc. Thesis: Synthesis of magnesium nanoparticles with ball mill;

B.Sc. Thesis: Investigation of friction stir welding on welded regions properties of Al6061 Alloys;

Course project: production of magnesium foams (extractive metallurgy laboratory course);

Industrial Project: Hydrogen production by reaction of aluminum with water for use in fuel cells;

Industrial Project: Synthesis of anodic electrocatalysts for application in direct methanol fuel-cells;

Industrial project: Investigation of fuel cells and their classification (literature project);

Industrial project: Standardization of fuel cells for their application (literature project):

Academic Experiences:

Teaching: "Welding high carbon steels" and "gas preservation welding", Entekhab University (current semester);

Teaching: "Physical properties" and "Materials joining methods", Entekhab University (second semester- 2013);

Research assistant at Materials and Energy Research Center (Agu 2012 until now);

Managing editor of science – student Journal of New Material;

Member of editorial board of science–student journal of New Material;

Member of the executive board of the fourth tournament of heat treatment;

The representative of materials science engineering science – student organization.

Work Experiences:

R&D and QC manager in Dirgodaze Jey refractory company (Sep 2012 until now);

Consultant in Atoosa Sanat Parsian engineering consulting company (Jan 2011 until now);

Research Interests:

Synthesis, characterization and applications of advanced materials and nanomaterials;

Hydrogen production and it's storage in metals;

Synthesis, characterization and applications of catalysts;

Magnesium nanoparticles and their applications;

Fuel cells operation and related green energy production;

Friction stir processing as a method for joining and producing composites;

Corrosion of materials and weld joints.

Skills:

- Computer Skills

Engineering software: Expert in AutoCAD, Power suite, X'pert and Clemex;

Microsoft Office: Expert in Excel, Word, PowerPoint, Publisher, etc.

- <u>Materials Analysis Skills</u>

Microstructural characterization (OM, SEM TEM and XRD)

Mechanical characterization (tensile, hardness, wear)

Electrochemical tests (Tafel polarization and cyclic voltametric)

Thermal analysis (DSC and TG)

Hydrogen absorption and desorption tests (Sievert)

Language Proficiency and Testes:

Persian: Native; English: good (planned for Toefl exam in Oct);

GRE: average (registered for exam in Oct12, 2013).

Honors and Awards:

Ranked 5th top student among 67 master science students in Sharif University of Technology

Ranked 116th among more than 4000 participants in MSc national entrance exam, 2009;

Ranked 3600th among more than 360,000 participants in Iranian undergraduate national entrance exam, 2005;

My MSc project was funded by Iran Nanotechnology Initiative Council (INIC), 2011.

References:

Dr. S.K. Sadrnezhaad, Professor, Material science and engineering Department, Sharif University of Technology (sadrnezh@sharif.edu - sadrnezh@yahoo.com);

Dr. M.R. Vaezi, Assistance Professor, Nanotechnology & Advance Materials Department, Materials and Energy Center (m_r_vaezi@merc.ac.ir - vaezi9016@yahoo.com);

Dr. F. Karimzadeh, Associate Professor, Material science Department, Isfahan University of Technology (Karimzadeh_f@cc.iut.ac.ir).