Curriculum Vitae

SYAMAK HOSSEIN NEDJAD
Professor, Ph. D.
Faculty of Materials Engineering,
Sahand University of Technology,
P. O. Box: 51335-1996, Tabriz, Iran.
Tel: +98-41-3345 9449, Fax: +98-41-3344 4333
E-mail: hossein@sut.ac.ir, syamak.hossein@gmail.com

COURSES TAUGHT:
1. Solidification
2. Phase Transformations
3. X-ray and Electron Diffraction
4. Advanced High Strength Steels
5. Vacuum Melting and Advanced Manufacturing Processes (CASTING)

RESEARCH INTRESTS:
1. Phase Transformations and Structure-Properties Correlation in Steels
2. Transmission Electron Microscopy and Electron Diffraction Patterns
3. X-ray Diffraction from Nanostructured Metallic Materials
4. Simulation of Solidification and Phase Transformations
5. Metals Additive Manufacturing

PAPERS PUBLISHED:

53. A. Siyahtiri, **S. Hossein Nedjad** , H. Hamed Zargari, K. Ito, " Medium-carbon dual-phase steels with spheroidized ferrite matrix", J. Mater. Res. Tech., accepted for publication. April 20, 2024.

52. R.O. Secer, **S. Hossein Nedjad**, M. Yildiz, Extending a phase field model of polycrystalline solidification for simulating grain evolution in metal additive manufacturing, Comp. Mater. Sci. , 240 (**2024**) 112997.

51. A.R. Abdali, **S. Hossein Nedjad**, H. Hamed Zargari, A. Saboori, M. Yildiz, "Predictive tools for the cooling rate-dependent microstructure evolution of AISI 316L stainless steel in additive manufacturing", J. Mater. Res. Tech., 29 (**2024**) 5530-5538.

50. **S. Hossein Nedjad**, M. Yildiz, A. Saboori, “Solidification behaviour of austenitic stainless steels during welding and directed energy deposition”, Sci. Tech. Weld. Join., 28 (**2023**) 1-17.

49. Y. Bagheri, H. Kamali, E. Kamali, **S. Hossein Nedjad**, “Formation of nodular bainite in an Fe-9.10 Ni-0.06 C (wt.%) alloy: A new microstructure for cryogenic steels”, Scripta Mater. 208 (**2022**) 114343.

48. H. Kamali, R.D. Field, A.J. Clarke, **S. Hossein Nedjad**, A.J. Clarke, M.J. Kaufman, “Development of the γ' stability in Co–Al–W alloys at 800 C by alloying with carbon”, Metall. Mater. Trans. A, 52A (**2021**) 5314-5328.

47. H. Kamali, M.J. Kaufman, R.D. Field, **S. Hossein Nedjad**, M.J. Kaufman, A.J. Clarke, “Kinetics of κ discontinuous precipitation in Co-10Al-3Cu-1C (at. pct)”, Metall. Mater. Trans. A, 52A (**2021**) 5159-5164.

46. Z. Afshari, E. Ahmadi, S. **Hossein Nedjad**, “Development of Ultrafine Grain Structure during Deformation-Thermal Treatment of Austenitic Manganese Steel”, Phys. Metals Metallogr., 122 (**2021**) 1492–1499.

45. A. Emdadi, **S. Hossein Nedjad**, H. Badri Ghavifekr, M. Kavanlouei, F. A. F. Lahiji, V. Ramezankhani, “Microstructural dependence of magnetic and magnetostrictive properties in Fe–19 at% Ga”, Rare Metals, 39 (**2020**) 413-420.

44. H. Shirazi, G. Miyamoto, **S. Hossein Nedjad**, T. Chiba, M. Nili Ahmadabadi, T. Furuhara, “Microstructure evolution during austenite reversion in Fe-Ni martensitic alloys”, Acta Mater, 144 (**2018**) 269-280.

43. Y. Karimi, **S. Hossein Nedjad**, H. Shirazi, M. Nili Ahmadabadi, H. Hamed Zargari, K. Ito, “Cold rolling and intercritical annealing of C-Mn steel sheets with different initial microstructures”, Mater. Sci. Eng. A 736 (**2018**) 392-399.

42. H. Kamali, **S. Hossein Nedjad**, M.J. Kaufman, R.D. Field, A.J. Clarke, “Discontinuous Precipitation Reactions in Co-10Al-4C (At. Pct), Metall. Mater. Trans. A, 19A (**2018**) 3198-3205.

41. M. Bahramyan, **S. Hossein Nedjad**, "X-ray Diffraction Line Broadening Analysis of Nanostructured Nickel Powder", Phys. Met. Metallogr., 118 (**2017**) 839–845.

40. M. Bahmani-Oskooee, **S. Hossein Nedjad**, A. Samadi, E. Kozeschnik, "Antibacterial cu-bearing AISI 410s stainless steels for applications in biological environments", Mater. Design 130 (**2017**) 442-451.

39. Y. Karimi, **S. Hossein Nedjad** , G. Miyamoto, H. Shirazi, T. Furuhara, "Banding effects on the process of grain refinement by cold deformation and recrystallization of acicular C-Mn steel", Mater. Sci. Eng. A 697 (**2017**) 1-7.

38. P. Asghari-Rad, M. Nili-Ahmadabadi, H. Shirazi, **S. Hossein Nedjad**, S. Koldorf, "A Significant Improvement in the Mechanical Properties of AISI 304 Stainless Steel by a combined RCSR and Annealing Process", Adv. Eng. Mater. 19 (**2017**) 1-8.

37. H. Hamed Zargari, **S. Hossein Nedjad**, “Microstructure and Mechanical Properties of Mn-Containing Maraging Steels”, J. Mater. Eng. Perform. 24 (**2015**) 3453-3458.

36. S. Ghafari-Gousheh, **S. Hossein Nedjad**, J. Khalil-Allafi, Tensile properties and interfacial bonding of multi-layered, high-purity titanium strips fabricated by ARB process, J. Mech. Behav. Biomed. Mater. 51 (**2015**) 147–153.

35. M.R. Movaghar Garabagh, **S. Hossein Nedjad**, “Structural Transitions of NiMn Preprecipitation Nanostructures as Determined by X-ray Diffraction line Broadening and Mossbauer Spectroscopy”, Metall. Mater. Trans. A, 46A (**2015**) 143-147.

34. A.A. Emdadi, **S. Hossein Nedjad**, H.G. Badri, “Effect of solidification texture on the magnetostrictive behavior of Galfenol”, Metall. Mater. Trans. A, 45A (**2014**) 906-910.

33. H. Ghasemi-Nanesa, M. Nili-Ahmadabadi, H.R. Koohdar, M. Habibi-Parsa, **S. Hossein Nedjad**, S.A. Alidokht, T. G. Langdon, "Strain-induced martensite to austenite reverse transformation in an ultrafine-grained Fe–Ni–Mn martensitic steel", Phil. Mag., 94 (**2014**) 1493–1507.

32. M.R. Movaghar Grarabagh, **S. Hossein Nedjad**, H. Hamed Zargari, M. Nili Ahmadabadi, “Transformation Mechanism of Preprecipitation NiMn Nanostructures”, Metall. Mater. Trans. A, 45A (**2014**) 1057-1067.

31. F. Hosseini Nasab, **S. Hossein Nedjad**, and S. Karimi, “A Comparison Between the Dislocation Structure of Ball-Milled Iron and Copper as Derived from the X-Ray Diffraction Peak Profile Analyses”, Phys. Met. Metallogr., 114 (**2013**) 1069-1073.

30. T. Jalal, **S. Hossein Nedjad**, S. Khalili Molan, “Structure and magnetic properties of nanostructured MnNi alloys fabricated by mechanical alloying and annealing treatments”, Phys. Met. Metallogr., 114 (**2013**) 400-405.

29. H. Ghadimi, **S. Hossein Nedjad**, B. Eghbali, “Enhanced grain refinement of cast aluminum alloy by thermal and mechanical treatment of Al-5Ti-B mater alloy”, Trans. Nonferrous Met. Soc. China 23(**2013**) 1563-1569.

28. H. Shirazi, G. Miyamoto, **S. Hossein Nedjad**, H. Ghasemi-Nanesa, M. Nili Ahmadabadi, T. Furuhara, “Microstructural evaluation of austenite reversion during intercritical annealing of Fe–Ni–Mn martensitic steel”, J. Alloys and Comp., 577 (**2013**) S572-577.

27. B. Avishan, S. Yazdani, **S. Hossein Nedjad**, “Toughness variations in nanostructured bainitic steels”, Mater. Sci. Eng. A, 548 (**2012**) 106-111.

26. A. Mahmudi, **S. Hossein Nedjad**, M.J. Behnam, "Effects of cold rolling on the microstructure and mechanical properties of Fe-Ni-Mn-Mo-Ti-Cr maraging steels", Int. J. Miner. Metall. Mater., 18 (**2011**) 557-561.

25. A. Mahmoudi, M.R. Zamanzad Ghavidel, **S. Hossein Nedjad**, A. Heidarzadeh, M. Nili Ahmadabadi, “Aging behavior and mechanical properties of maraging steels in the presence of submicrocrystalline Laves phase particles”, Mater. Charac., 62 (**2011**) 976-981.

24. **S. Hossein Nedjad**, Y. Zahedi Moghaddam, A. Mamdouh Vazirabadi, H. Shirazi, M. Nili Ahmadabadi, "Grain refinement by cold deformation and recrystallization of bainite and acicular ferrite structures of C–Mn steels", Mater. Sci. Eng. A 528 (**2011**) 1521–1526.

23. **S. Hossein Nedjad**, F. Hosseini Nasab, M.R. Movaghar Garabagh, S.R. Damadi, M. Nili Ahmadabadi, " X-ray diffraction study on the strain anisotropy and dislocation structure of deformed lath martensite", Metall. Mater. Trans. A, 42A (**2011**) 2493-2497.

22. M. Nili Ahmadabadi, H. Shirazi, H. Ghasemi-Nanesa, **S. Hossein Nedjad**, B. Poorganji, T. Furuhara, "Role of severe plastic deformation on the formation of nanograins and nano-sized precipitates in Fe-Ni-Mn steel", Mater. Design. 32 (**2011**) 3526-3531.

21. H. Ghasemi-Nanesa, M. Nili-Ahmadabadi, H. Shirazi, **S. Hossein Nedjad**, S.H. Pishbin, "Ductility enhancement in ultrafine-grained Fe-Ni-Mn martensitic steel by stress-induced reverse transformation", Mater. Sci. Eng. A 527 (**2010**) 7552-7556.

20. **S. Hossein Nedjad**, J. Teimouri, A. Tahmasebifar, H. Shirazi, M. Nili Ahmadabadi, "A new concept in further alloying of Fe—Ni—Mn maraging steels"**,** Scripta Mater. 60 (**2009**) 528-531.

19. **S. Hossein Nedjad**, S. Meimandi, A. Mahmoudi, T. Abedi, S. Yazdani, H. Shirazi, M. Nili Ahmadabadi, "Effect of aging on the microstructure and tensile properties of Fe-Ni-Mn-Cr maraging alloys", Mater. Sci. Eng. A 501 (**2009**) 182-187.

18. **S. Hossein Nedjad**, M. Nili Ahmadabadi, T. Furuhara, "Annealing behavior of an ultrafine-grained Fe–Ni–Mn steel during isothermal aging", Mater. Sci. Eng. A 503 (**2009**) 156-159.

17. **S. Hossein Nedjad**, M.R. Movaghar Gharabagh, "Dislocation structure and crystallite size distribution in lath martensite determined by X-ray diffraction peak profile analysis", Int. J. Mater. Res. 99 (**2008**) 1248-1255.

16. M.R. Movaghar Garabagh, **S. Hossein Nedjad**, M. Nili Ahmadabadi, " X-ray diffraction study on a nanostructured 18Ni maraging steel prepared by equal-channel angular pressing", J. Mater. Sci. 43 (**2008**) 6840-6847.

15. M. Nili-Ahmadabadi, H. Shirazi, A. Fatehi, **S. Hossein Nedjad**, " Improvement in mechanical properties of Fe-Ni-Mn maraging steel by heavy cold rolling", Int. J. Modern Phys. B 22 (**2008**) 2814-2822.

14. H. Meidani, **S. Hossein Nedjad**, M. Nili Ahmadabadi, "A novel process for fabrication of globular structure by equal channel angular pressing and isothermal treatment of semisolid metal", Solid State Phenomena, 141-143 (**2008**) 445-450.

13. M. Iranpour Mobarake, M. Nili-Ahmadabadi, B. Poorganji, A. Fatehi, H. Shirazi,T. Furuhara, M. Habibi Parsa, **S. Hossein Nedjad**, "Microstructural study of an age hardenable martensitic steel deformed by equal channel angular pressing", Mater. Sci. Eng. A, 491 (**2008**) 172-176.

12. M.R. Movaghar Garabagh, **S. Hossein Nedjad**, H. Shirazi, M. Iranpour Mobarekeh, M. Nili Ahmadabadi, "X-ray diffraction peak profile analysis aiming at better understanding of the deformation process and deformed structure of a martensitic steel", Thin Solid Films, 516 (**2008**) 8117-8124.

11. **S. Hossein Nedjad,** M. Nili Ahmadabadi and T. Furuhara, "Correlation between the intergranular brittleness and precipitation reactions during isothermal aging of an Fe-Ni-Mn maraging steel", Mater. Sci. Eng. A, 490 (**2008**) 105-112.

10. **S. Hossein Nedjad**, M. Nili Ahmadabadi, T. Furuhara, "The extent and mechanism of nanostructure formation during cold rolling and aging of lath martensite in alloy steel", Mater. Sci. Eng. A 485 (**2008**) 544-549.

9. **S. Hossein Nedjad**, M. Nili Ahmadabadi, and T. Furuhara, "Transmission electron microscopy study on the grain boundary precipitation of Fe-Ni-Mn maraging steel", Metall. Mater. Trans. A, 39A (**2008**) 19-27.

8. **S. Hossein Nedjad**, H. Meidani and M. Nili Ahmadabadi, "Effect of equal channel angular pressing on the microstructure of a semisolid aluminum alloy", Mater. Sci. Eng. A 475 (**2008**) 224-228.

7. **S. Hossein Nedjad,** M.R. Movaghar Garabagh, M. Nili Ahmadabadi and H. Shirazi, "Effect of further alloying on the microstructure and mechanical properties of Fe-9Ni-5Mn-5Mo maraging steel", Mater. Sci. Eng. A, 473 (**2008**), 249-253.

6. **S. Hossein Nedjad** and A. Farzaneh, "Formation of fine intragranular ferrite in cast plain carbon steel inoculated by titanium oxide nanopowder", Scripta Mater. 57 (**2007**) 937–940.

5. **S. Hossein Nedjad,** M. Nili Ahmadabadi, T. Furuhara and T. Maki, "Evolution of precipitate coarsening reaction in a nanostructured Fe-Ni-Mn maraging alloy", Solid State Phenomena, 114 (**2006**) 159-164.

4. **S. Hossein Nedjad,** M. Nili Ahmadabadi, T. Furuhara and T. Maki, "High resolution transmission electron microscopy study on the nano-scale twining of θ-NiMn precipitates in an Fe-Ni-Mn maraging alloy", Phys. Stat. Sol. A, 203 (**2006**) 2229-2235.

3. **S. Hossein Nedjad**, M. Nili Ahmadabadi, R. Mahmudi, T. Furuhara and T. Maki, "Analytical transmission electron microscopy study of grain boundary precipitates in Fe-Ni-Mn maraging alloy", Mater. Sci. Eng. A, 438–440 (**2006**) 288–291.

2. **S. Hossein Nedjad**, M. Nili Ahmadabai, R. Mahmudi and H. Farhangi, "Effect of conventional and subzero treating on the mechanical properties of aged martensitic Fe-12 Ni-X Mn alloys", Mater. Sci. Eng. A, A 378 (**2004**) 314-318.

1. **S. Hossein Nedjad** and M. Nili Ahmadabadi, "Effect of Ti addition on the microstructure and mechanical properties of a cast Fe-Ni-Mo-Mn maraging steel", J. Phys. France, 112 (**2003**) 461-464.