

Curriculum Vitae

Ali Ashrafi

Associate Professor
Department of Materials Engineering
Isfahan University of Technology
Isfahan, Iran
(Dec. 2020 up to now)



Assistant Professor
Department of Materials Engineering
Isfahan University of Technology
Isfahan, Isfahan, Iran
(Jul. 2013 up to Dec. 2020)

Assistant Professor
Dept. of Mat. Sci. & Eng.
Faculty of Engineering
Shahid Chamran University of Ahvaz
Ahvaz, Iran
(Sep. 2008- Jul. 2013)

Personal Info.

Birthday	14 Jan 1977
Place of Birth	Isfahan, Iran
Marital Status (12)	Married, 2 Children, Mohammad (19), Sara
Phone	+98 31 3391 5747
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Academics

(Feb. 2002 – Feb. 2008)	
PhD, Materials Engineering	Corrosion and Protection of Materials Department of Materials Engineering Isfahan University of Technology (IUT)
(1999-2001)	
MSc, Materials Engineering	Corrosion and Protection of Materials Department of Materials Engineering Isfahan University of Technology (IUT)
(1994-1999)	
BSc, Materials Engineering	Casting Department of Materials Engineering Ferdowsi University of Mashhad (FUM)

Academic Dissertations

PhD Dissertation Title: ***Electropolymerization of Pyrrole on Mild Steel and Investigating its Corrosion Resistance***
Supervisor: *Prof. M. A. Golozar*
Advisor: *Prof. S. Mallakpour*

MSc. Dissertation Title: ***Coating of Mild Steel Using Polypyrrole, Polymethylpyrroel and Poly(pyrrole-co-methylpyrrole) by Electrochemical Polymerization***
Supervisor: *Prof. M. A. Golozar*
Advisor: *Prof. S. Mallakpour*

BSc. Dissertation Title ***Aluminizing of Mild Steel by Hot-Dip Process***
Supervisor: *Assoc. Prof. M. Mazinani*

Administrative Positions

(June 2021 up to now)

***Head of Surface Engineering and Corrosion Group,
Department of Materials
Engineering***

Isfahan University of Technology

(June 2021 up to now)

***CEO
Middle-East Iron and Steel
Technology and Research Co .
(MISTR)***

Isfahan Science & Technology Town

(Nov. 2020 – June 2021)

***Vice President of
Student's Affairs***

Isfahan University of Technology

(Aug. 2019 – Nov 2020)

Manager of Student's

Affairs

Isfahan University of Technology

(Nov. 2018 – Aug 2019)

***Manager of Student's
Research Activities***

Isfahan University of Technology

(2018)

***Scientific Secretary of
Steel Symposium 96
(Kish, Iran)***

Iron & Steel Society of Iran

(2017)

***Scientific Secretary of
14th Heat Treatments
Competitions***

Isfahan University of Technology

(2015)

***Scientific Secretary of
Steel Symposium 93
(Ardakan, Yazd, Iran)***

Iron & Steel Society of Iran

(2014 – 2016)

Responsible for Holding the MSc student's Scientific Conferences

*Department of Materials Engineering,
Isfahan University of Technology*

(2011 – 2012)

***Head of Nanotechnology Council
Establishment Workgroup***

Shahid Chamran University of Ahvaz

(2010 – 2012)

***Vice president of 17th Technical
Committee (steels), (ISIRI-TC17)***

*Institute of Standards and Industrial
Research of Iran*

(2010 – 2012)

***President of 16th Subcommittee (ISIRI-
TC17-SC16), Steels for the Reinforcement
and Prestressing of Concrete***

*Institute of Standards and Industrial
Research of Iran*

(2011 – 2012)

Member of Research Committee in Power Generation in Khouzestan, Iran *Khuzestan Regional Electricity Company*

(2010 – 2011)

Member of Research Committee in Power Transmission in Khouzestan, Iran *Khuzestan Regional Electricity Company*

Teaching Experience

2013-2022

Advanced Electrochemistry, (PhD & MSc)
Advanced Physical Metallurgy (PhD)
Cathodic Protection, (MSc)
Stress Corrosion Cracking, (MSc)
Welding Inspection (MSc & PhD)
Advanced Corrosion (MSc & PhD)
Advanced Corrosion Lab (MSc)
Corrosion & Oxidation (BSc)
Cathodic & Anodic Protection (MSc & PhD)
Materials Science, (BSc Course)

Isfahan University of Technology

2012

Advanced Electrochemistry, (MSc course)
Isfahan University of Technology (as visiting Asst. Prof.)

2010 -2012

Metallurgical Failure Analysis, (MSc course)

Petroleum University of Technology (Abadan unit) (as visiting Asst. Prof.)

2008 - 2013

Measurement Errors (MSc course)

Nanodestructive Testing (MSc course)

Materials Analysis Methods, (BSc course),

Surface Engineering, (BSc course) Corrosion

and Oxidation, (BSc course)

Engineering Technical Drawing, (BSc course)

Materials Science, (BSc course) Manufacturing

Technology (BSc course)

Shahid Chamran University of Ahvaz

Laboratory Experience

2017

*Founder of “Sustainable Energy Laboratory”,
Isfahan University of Technology*

2012

*Founder of “Plasma Electrolysis Lab”,
Shahid Chamran University of Ahvaz*

2009

*Co-Founder of “Advanced Corrosion Lab”,
Shahid Chamran University of Ahvaz*

2004-2005

*Assistant of “Corrosion Lab”,
Isfahan University of Technology*

2003-2004

*Asst. of “Scanning Electron Microscope Lab”,
Isfahan University of Technology*

2003-2004

*Assistant of “Scanning Electron Microscope
Lab”, Isfahan University of Technology*

2001-2003

*Assistant of “X-ray Diffraction Lab”,
Isfahan University of Technology*

Journal Articles

2022

68

M Ajabshiri, A Ashrafi, M Shamanian, M.A Karimi
Microstructure and corrosion resistance of TLPB of Inconel 625 to 316L SS
Materials Science and Technology, (2022) 1-9

67

M Ajabshiri, A Ashrafi, M Shamanian, M.A Karimi
Asymmetric Cu Diffusion in Transient Liquid Phase (TLP) Bonding of Inconel 625 to AISI 316L Stainless Steel with Cu Interlayer
Journal of Phase Equilibria and Diffusion 43 (2022) 43-50

66

M Ajabshiri, A Ashrafi, M Shamanian, M.A Karimi
The Effect of Bonding Time on Dissimilar Joint Properties Between Inconel 625 and AISI 316L Using Transient Liquid Phase Bonding Method with Cu Interlayer
Journal of Materials Engineering and Performance, (2022) 1-15

2021

65

S. Abbaspoor, A. Ashrafi, M. Salehi
Cathodic disbonding of self-healing composite coatings: effect of ethyl cellulose micro/nanocapsules
Corrosion Engineering, Science and Technology, 56 (2021) 659-667

64

M. S. Koochaki, R. Esmaeely Neisiany, S. Nouri Khorasani, Ali Ashrafi, S. P. Trasatti, M. Magni
The influence of the healing agent characteristics on the healing performance of epoxy coatings: Assessment of the repair process by EIS technique
Progress in Organic Coatings 159 (2021) 106431

63

V. Gholipour, M. Shamanian, S. Ghaderi, A. Maleki, A. Ashrafi
Transient Liquid Phase Bonding of Al-2% Nanoclay Composite: Microstructural Characterization and Mechanical Properties
Transactions of the Indian Institute of Metals, 74 (2021) 2285-2295

62

V. Gholipour, M. Shamanian, A. Ashrafi, A. Maleki
Development of aluminium-nanoclay composite by using powder metallurgy and hot extrusion process
Metals and Materials International 27 (2021) 3681-3694

61

M. S. Koochaki, R. Esmaeely Neisiany, S. Nouri Khorasani, Ali Ashrafi, S. P. Trasatti, M. Magni
A highly responsive healing agent for the autonomous repair of anti-corrosion coatings on wet surfaces. In operando assessment of the self-healing process
Journal of Materials Science 56 (2021) 1794–1813

60

F Yoosefan, A Ashrafi, S. M. Monirvaghefi
Development of self-healing coatings based on ethyl cellulose micro/nano-capsules
Metals and Materials International, 27 (2021) 106-117

2020

59

S Ghaderi, F Karimzadeh, A. Ashrafi, S. H Hosseini
Effect of pressure, temperature and homogenization on the dissolution behavior and mechanical properties of IN718/AISI 304 during transient liquid phase bonding
Journal of Manufacturing Processes, 60 (2020) 213-226

58

F Yoosefan, A Ashrafi, S. M. Monirvaghefi, I Constantin
Synthesis of CoCrFeMnNi High Entropy Alloy Thin Films by Pulse Electrodeposition: Part 1: Effect of Pulse Electrodeposition Parameters
Metals and Materials International, 26 (2020) 1262-1269

57

M Mirzaei, A. P Soleymani, A Ashrafi, M. M. Momeni
Electrochemically Enhanced Hydrothermal Production of Cupric Oxide Photoelectrode on Copper Substrate
Journal of The Electrochemical Society, 167 (2020) 066507

56

S Ghaderi, F Karimzadeh, A Ashrafi
Transient liquid phase bonding of 304L stainless steels with the austenitic and

martensitic microstructures

Journal of Welding Science and Technology of Iran, 2 (2020) 1-11

55

S Ghaderi, F Karimzadeh, A Ashrafi

Evaluation of microstructure and mechanical properties of transient liquid phase bonding of Inconel 718 and nano/ultrafine-grained 304L stainless steel

Journal of Manufacturing Processes, 49 (2020) 162-174

54

B Borooghani, A Ashrafi, H Valeh, H Honarvar

Failure analysis of a gate valve bonnet at wellhead facilities in sour gas service

Engineering failure analysis, 108 (2020) 104250

53

MR Pakmanesh, M Shamanian, A Ashrafi

Effects of Nd:YAG Pulsed Laser Welding Parameters on the Electrochemical Corrosion Properties of Carbon-Coated 316L Foils in a Simulated PEMFC Environment

Transactions of the Indian Institute of Metals, 73 (2020) 169-180

2019

52

M. S. Koochaki, R. Esmaeely Neisiany, S. Nouri Khorasani, Ali Ashrafi, S. P.

Trasatti, M. Magni

Facile strategy toward the development of a self-healing coating by electrospray method

Materials Research Express, 6 (2019) 116444

51

N. Naghshehkish, S. E. Mousavi, F. Karimzadeh, A. Ashrafi, M. Nosko, V.

Trembošová, B. Sadeghi

Effect of graphene oxide and friction stir processing on microstructure and mechanical properties of Al5083 matrix composite

Materials Research Express, 6 (2019) 106566

50

F Mohammadi, M Kharaziha, A Ashrafi

Role of Heat Treatment on the Fabrication and Electrochemical Property of Ordered TiO₂ Nanotubular Layer on the As-Cast NiTi

Metals and Materials International, 25 (2019) 617-626

49

S Shahzamani, A Ashrafi, MR Toroghinejad, V Dehnavi, A Hakimizad
The use of low duty cycle pulsed-unipolar current mode for producing Alumina/ZnO nanocomposite coatings via plasma electrolytic oxidation process
Materials Research Express, 6 (2019) 076555

48

F Mohammadi, N Golafshan, M Kharaziha, A Ashrafi
Chitosan-heparin nanoparticle coating on anodized NiTi for improvement of blood compatibility and biocompatibility
International Journal of Biological Macromolecules, 127 (2019) 159-168

47

S Abbaspoor, A Ashrafi, R Abolfarsi
Development of self-healing coatings based on ethyl cellulose micro/nano-capsules
Surface Engineering, 35 (2019) 273-280

46

S Touri, S.M Monirvaghefi, A. Ashrafi
Fabrication of Functionally Graded Electroless Ni-P Coating with Variable Thickness and Evaluating the Coating Thickness Changes and Hardness by Response Surface Method (RSM)
Iranian Journal of Surface Science and Engineering, 41 (2019) 1-13

2018

45

J Kangazian, M Shamanian, A Ashrafi
Surface Characterization of Incoloy 825 Ni-Based Alloy/2507 Super Duplex Stainless Steel Dissimilar Friction Stir Welds
Corrosion, 74 (2018) 1259–1271

44

S Abbaspoor, A Ashrafi, M Salehi
Synthesis and characterization of ethyl cellulose micro/nanocapsules using solvent evaporation method
Colloid and Polymer Science, 296 (2018) 1509–1514

43

M Vakili, E Borhani, A Ashrafi
Corrosion Behavior of Nano-/Ultrafine-Grained Al-0.2 wt.% Sc Alloy Produced by Accumulative Roll Bonding (ARB)
Journal of Materials Engineering and Performance, 27 (2018) 4253-4260

42

SH Hashemi, A Ashrafi
Characterisations of low phosphorus electroless Ni and composite electroless Ni-P-SiC coatings on A356 aluminium alloy
Transactions of the IMF ,The International Journal of Surface Engineering and Coatings, 96 (2018) 52-56

41

N Ghafouri, A Ashrafi, M Kharaziha, A Allafchian
Investigating the Effect of Ethylcellulose Nanofibres on Cathodic Disbondment of Polyurethane Coatings on Steel Pipelines
Iranian Journal of Surface Science and Engineering, 14 (2018) 37-48

40

S Zolfaghari, AR Baboukani, A Ashrafi, A Saatchi
Investigation the effects of Na₂MoO₄ as an inhibitor on electrochemical corrosion behavior of 316L stainless steel in LiBr solution
Zaštita materijala, 59 (2018) 108-116

2017

39

MH Allahyarzadeh, M Aliofkhaezraei, A Sabour Rouhaghdam, V Torabinejad, Hossein Alimadadi, A Ashrafi
Electrodeposition mechanism and corrosion behavior of multilayer nanocrystalline nickel-tungsten alloy
Electrochimica Acta 258 (2017) 883-899

38

Abbas Bahrami, Ali Ashrafi, Seyed Mahdi Rafiaei, Maryam Yazdan Mehr
Sigma phase-induced failure of AISI 310 stainless steel radiant tubes
Engineering Failure Analysis 82 (2017) 56-63

37

Behnoosh Sattari, Morteza Shamanian, Ali Ashrafi, Mehdi Salehi, Farshid Salimijazi
Effect of number of passes on the corrosion behavior of Fe/Al surface composites produced by plasma spraying and friction stir processing
Journal of Materials Processing Technology 250 (2017) 35-44

36

Asghar Babamir Satehi, Masumeh Ziaee, Ali Ashrafi
Silica nanoparticles: a potential carrier of chlorpyrifos to control two stored-product

insect pests as slurries
Entomologia Generalis 36 (2017)

35

Jalal Kangazian, Morteza Shamanian, Ali Ashrafi
Dissimilar welding between SAF 2507 stainless steel and Incoloy 825 Ni-based alloy: The role of microstructure on corrosion behavior of the weld metals
Journal of Manufacturing Processes 29 (2017) 376-388

34

Asghar Babamir-Satehi, Masumeh Ziaee, Ali Ashrafi
Toxicity of chlorpyrifos against *Rhyzopertha dominica* and *Tribolium confusum* adults on different surfaces
Toxin Reviews 36 (2017) 57-62

2016

33

Ali Majedi, Fatemeh Davar, Alireza Abbasi, Ali Ashrafi
Modified Sol-Gel Based Nanostructured Zirconia Thin Film: Preparation, Characterization, Photocatalyst and Corrosion Behavior
Journal of Inorganic and Organometallic Polymers and Materials 26 (2016) 932-942

32

Sadaf Shabanian, Fakhreddin Ashrafizadeh, Navid Saeidi, Ali Ashrafi
Failure analysis of carbon steel components in a water bath heater and the influence of ethylene glycol concentration
Engineering Failure Analysis 66 (2016) 533-543

31

MH Allahyarzadeh, A Ashrafi, A Golgoon, B Roozbehani
Effect of pulse plating parameters on the structure and properties of electrodeposited Ni Mo films
Materials Chemistry and Physics 175 (2016) 215-222

30

A Moteshakker, I Danaee, S Moeinifar, A Ashrafi
Hardness and tensile properties of dissimilar welds joints between SAF 2205 and AISI 316L
Science and Technology of Welding and Joining 21 (2016) 1-10

2015

29

M Golmohammadi, M Atapour, A Ashrafi

Fabrication and wear characterization of an A413/Ni surface metal matrix composite fabricated via friction stir processing
Materials & Design 85 (2015) 471-482

28

S Takhti, M Reihanian, A Ashrafi
Microstructure characterization and mechanical properties of gas tungsten arc welded cast A356 alloy
Transactions of Nonferrous Metals Society of China 25 (2015) 2137- 2146

27

IMAN BADPEYMA, ALI ASHRAFI, ISFAHANI MOJTABA NASR
THE CORROSION RESISTANCE OF THE COMPOSITE COATINGS POLYANILINE/UREA-FORMALDEHYDE MICROCAPSULES CONTAINING HEALING AGENT
JOURNAL OF ADVANCED MATERIALS AND TECHNOLOGIES 3 (2015) 21-33

2014

26

Mahdi Nasibi, Milad Mohammady, Ali Ashrafi, Ali Akbar Dehno Khalaji, Masoud Moshrefifar, Elyas Rafiee
Nanosized scale roughness and corrosion protection of mild steel in hydrochloric acid solution and in the presence of Turmeric (Curcuma Longa) Extract as a green corrosion inhibitor: FTIR, polarization, EIS, SEM, EDS, AFM studies, and neural network modeling
Journal of Adhesion Science and Technology 28 (2014) 2001-2015

25

A Nikfahm, I Danaee, A Ashrafi, MR Toroghinejad
Investigating the corrosion behavior of nanostructured copper strip produced by accumulative roll bonding (ARB) process in acidic chloride environment
Iranian Journal of Materials Science & Engineering 11 (2014) 25-36

24

A Nikfahm, I Danaee, A Ashrafi, MR Toroghinejad
Corrosion Behavior of Ultra Fine Grain Copper Produced by Accumulative Roll Bonding Process
Transactions of the Indian Institute of Metals 67 (2014) 115-121

23

A Namjou, R Dehmlaei, A Ashrafi
A comparative study on direct and pulsed current gas tungsten arc welding of 25Cr–35Ni heat resistant steel
Int. J. Nat. Eng. Sci 8 (2014) 22-28

2013

22

A Nikfahm, I Danaee, A Ashrafi, MR Toroghinejad
Effect of grain size changes on corrosion behavior of copper produced by accumulative roll bonding process
Materials Research 16 (2013) 1379-1386

21

E. Rafiee, M. Farzam, M.A. Golozar, A. Ashrafi
An Investigation on Dislocation Density in Cold-Rolled Copper Using Electrochemical Impedance Spectroscopy
ISRN Corrosion (2013) 1-6

20

E Darmiani, I Danaee, M.A. Golozar, M.R. Toroghinejad, A. Ashrafi, A. Ahmadi
Reciprocating wear Resistance of Al-SiC Nano-composite fabricated by Accumulative Roll Bonding process
Materials & Design 50 (2013) 497 - 502

19

M. Nasibi, M. Mohammady, E. Ghasemi, A. Ashrafi, D. Zaarei, G. Rashed
Corrosion inhibition of mild steel by Nettle (*Urtica dioica* L.) extract: polarization, EIS, AFM, SEM and EDS studies
Journal of Adhesion Science and Technology, 27 (2013) 1873-1885

18

N. Keyshams, S. R. Fatemi Tabatabaei, H. Najafzadehvarzi, A. Ashrafi
Effect of Amonium Vanadate Nano-Particles on Experimental Diabetes and Biochemical Factors in Male Spargue-Dawly Rats
Zahedan Journal of Research in Medical Sciences, 15 (2013) 59 - 64

2012

17

S. Hatami Boura, M. Peikari, A. Ashrafi, M. Samadzadeh
Self-healing ability and adhesion strength of capsule embedded coatings—Micro and nano sized capsules containing linseed oil
Progress in Organic Coatings 75 (2012) 292– 300

16

M. H. Allahyarzadeh, B. Roozbehani, A. Ashrafi, S. R. Shadizadeh, A. Seddighian, E. Kheradmand
A Novel Aspect of Two Imidazolium-Based Ionic Liquids in Electrodeposition of Amorphous/Nanocrystalline Ni-Mo
Journal of the Electrochemical Society, 159 (2012) pp. D473-D478

15

M. H. Allahyarzadeh, B. Roozbehani, A. Ashrafi, S. R. Shadizadeh,
Effect of Surface Preparation on Corrosion Resistance of Electrochemically Deposited Ni-Mo Alloys in the Presence 1-Methyl-Imidazolium Chloride Ionic Liquid
Electrochemical Society Transactions, 41 (2012) pp.29-46

14

M. H. Allahyarzadeh, B. Roozbehani, A. Ashrafi, S. R. Shadizadeh, E. Kheradmand
Electrochemically Deposition of High Mo Content Amorphous/Nanocrystalline Ni-Mo Using Ionic Liquids as Additive
Electrochemical Society Transactions, 41 (2012) pp.11-28

13

S. Mallakpour, Z. Rafiee, A. Ashrafi
Synthesis and characterization of novel silver/L-phenylalanine-based optically active polyacrylate nanocomposite
Journal of Applied Polymer Science, 124 (2012), pp. 4491–4495.

12

M.H. Allahyarzadeh, B. Roozbehani, A. Ashrafi, M. Mohammadi
Electrodeposited Ni-Mo-TiO₂ Nanocomposite Coating with High Resistance to Corrosion in Nitric Acid Solution
Journal of Corrosion Science and Engineering, 15 (2012), pp. 1-14

11

N. Arianpouya, M. Shishesaz, A. Ashrafi
Analysis of synergistic effect of nanozinc/nanoclay additives on the corrosion performance of zinc-rich polyurethane nanocomposite coatings
Polymer Composites, Volume 33, Issue 8, pages 1395–1402, August 2012

10

Z. Shirband, M. R. Shishesaz, A. Ashrafi
Investigating the effect of heat treatment on hydrogen permeation behavior of API X-70 steel
Phase Transitions, Volume 85, Issue 6, pages 503-511, 2012

2011

09

M.H. Allahyarzadeh, B. Roozbehani, A. Ashrafi
Electrodeposition of high Mo content amorphous/nanocrystalline Ni-Mo alloys using 1-ethyl-3-methyl-imidazolium chloride ionic liquid as an additive
Electrochimica Acta 56 (2011) 10210–10216

08

M.H. Allahyarzadeh, B. Roozbehani, A. Ashrafi, S.R. Shadizadeh
Electrodeposition of high Mo content amorphous/nanocrystalline Ni-Mo alloys using 1-methyl-imidazolium chloride ionic liquid as an additive
Surface & Coatings Technology 206 (2011) 137–142

07

Z. Shirband, M. R. Shishesaz, A. Ashrafi
Hydrogen degradation of steels and its related parameters, a review
Phase Transitions, Volume 84, Issue 11-12, November 2011, pages 924-943

06

M. Samadzadeh, S. Hatami Boura, M. Peikari, A. Ashrafi, M. Kasiriha
Tung oil: An autonomous repairing agent for self-healing epoxy

coatings Progress in Organic Coatings, 70 (2011) 383–387

M. Samadzadeh, S. Hatami Boura, M. Peikari, S.M. Kasiriha, A. Ashrafi

A review on self-healing coatings based on micro/nanocapsules

Progress in Organic Coatings, 68 (2010) 159–164

2010

05

2009

04

A. Ashrafi, M. A. Golozar, S. Mallakpour

Corrosion Behavior of 316L Stainless Steel Coated by Amorphous and Semicrystalline Polypyrrole

Surface Engineering, 25 (2009), 120-126

2008

03

A. Ashrafi, M. A. Golozar, S. Mallakpour

EIS Investigation of Passive Film Formation on Mild Steel in Oxalic Acid Solution

Journal of Applied Electrochemistry, Vol.38, pp.225-229, 2008.

2006

02

A. Ashrafi, M. A. Golozar, S. Mallakpour

Morphological Investigation of Polypyrrole Coating on Stainless Steel

Synthetic Metals, Vil.156, No.18-20, pp.1280-1285, 2006.

2003

01

A. Ashrafi, M. A. Golozar, S. Mallakpour

Electropolymerization of pyrrole and N-methylpyrrole on mild steel surface

Iranian Polymer Journal Vol.12, No.6, pp.485-490, 2003.

Conference Papers

Over 50 National & international conference papers have been presented.

Hobbies

Volleyball (setter), Tennis, Cooking (Iranian & Italian).