# Reza Soltani, B.Sc.

Faculty of Metallurgy and Materials Engineering

University of Tehran

Tel (Direct): +98 (21)82084067

email: rsoltani@ut.ac.ir

Website:

**EDUCATION**

**B.Sc In Materials engineering**Isfahan University of Technology null-yesr-char-1994  
**M.A.Sc In Materials Science and Engineering**Sharif University of Technology null-yesr-char-1997  
**Ph.D In Materials Science and Engineering**University of Toronto null-yesr-char-2007

**PUBLICATIONS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **595** | **14** | **31** | **24** | **0** |
| Citations | h-Index | Article | Conference | Book |

***Articles***

**1.** Characterization and Corrosion Behavior of Nano-ceramic Coatings Produced by MAO Method: The Role of Process Time. Shahri Zahra, Allah Karam Seed Reza, Soltani Reza, Jafari Hassan (2024)., JOM, 76(1), 222-231.  
  
**2.** Bio-Corrosion, Mechanical and Microstructural Properties of TiTaMoVZr High-Entropy Alloy Film on Ti–6Al–4V Substrate. gashti Milad, Mehdinavaz Aghdam Rouhollah, Motallebzadeh Amir, Gharibi Asl Farid Gharibi Asl, Soltani Reza, ashrafi ali, Balaei hasan, Razazzadeh Alireza (2023)., METALS AND MATERIALS INTERNATIONAL, 8(11).  
  
**3.** Li0.33La0.56TiO3, a novel coating to improve the electrochemical properties and safety of NCM523 cathode materials for Li-ion batteries. [] [], Razmjoo Khollari Mohammad Amin, Soltani Reza (2023)., NEW JOURNAL OF CHEMISTRY, 1(1).  
  
**4.** Effect of using unpyrolyzed powder on mechanical properties of vertically cracked thermal barrier coatings. Izadinia Mohamad, Soltani Reza, Heydarzadeh Sohi Mahmoud, Coyle Tom (2023)., SURFACE & COATINGS TECHNOLOGY, 459(347), 129404.  
  
**5.** Modification of flame-sprayed NiCrBSi alloy wear-resistant coating by friction stir processing and furnace re-melting treatments. Aliabadi Mohsen, Khodabakhshi Farzad, Soltani Reza, Gerlich Adrian P. (2023)., SURFACE & COATINGS TECHNOLOGY, 455(1), 129236.  
  
**6.** Corrosion, mechanical and bioactivity properties of HA-CNT nanocomposite coating on anodized Ti6Al4V alloy. Dalili Zamharir Faezeh, Mehdinavaz Aghdam Rouhollah, Soltani Reza, Saremi Mohsen (2022)., JOURNAL OF MATERIALS SCIENCE-MATERIALS IN MEDICINE, 33(4).  
  
**7.** In vitro Corrosion Behavior and Biological Properties of Magnesium- Zinc-Calcium Alloy Coated with Polycaprolactone Nanofibers. Hadavi Seyedeh Hosna, Soltani Reza, Tamjid Elnaz, Mehdinavaz Aghdam Rouhollah (2021)., Journal of Ultrafine Grained and Nanostructured Materials, 1(54), 93-100.  
  
**8.** Improved properties of dual-phase steel via pre-intercritical annealing treatment and thermal cycling. Ghaemifar Sajad, Mirzadeh Soltanpour Hamed, Sarkari Khorami Mahmoud, Soltani Reza, Nasiri Zahra (2020)., MATERIALS SCIENCE AND TECHNOLOGY, 36(15), 1663-1670.  
  
**9.** Formation of vertical cracks in air plasma sprayed YSZ coatings using unpyrolyzed powder. Izadinia Mohamad, Soltani Reza, Heydarzadeh Sohi Mahmoud (2020)., CERAMICS INTERNATIONAL, 1(1).  
  
**10.** Microstructure and wear properties of plasma nitrided low alloy steel tubes. Ettelaei Maryam, Soltani Reza, Rahimi Mohammadreza (2020)., Materials Research Express, 6(12), 126439.  
  
**11.** Effect of segmented cracks on TGO growth and life of thick thermal barrier coating under isothermal oxidation conditions. Izadi Mohammad, Soltani Reza, Heydarzadeh Sohi Mahmoud (2019)., CERAMICS INTERNATIONAL, 0(0).  
  
**12.** Development of HA-CNTs composite coating on AZ31 magnesium alloy by cathodic electrodeposition. Part 1: Microstructural and mechanical characterization. Khazeni Dena, Saremi Mohsen, Soltani Reza (2019)., CERAMICS INTERNATIONAL, 45(9), 11174-11185.  
  
**13.** Development of HA-CNTs composite coating on AZ31 Magnesium alloy by cathodic electrodeposition. Part 2: Electrochemical and in-vitro behavior. Khazeni Dena, Saremi Mohsen, Soltani Reza (2019)., CERAMICS INTERNATIONAL, 45(9), 11186-11194.  
  
**14.** Tribological properties of water-based drilling fluids with borate nanoparticles as lubricant additives. Rastegar Moghaddam Hosna, Soltani Reza, Alaei Mahshid, سلیمانی محمد حسین (2018)., Geoenergy Sicence and Engineering, 171(DEC), 253-259.  
  
**15.** Optimization of plasma electrolyte oxidation process parameters for corrosion resistance of Mg alloy. Shahri Zahra, Allah Karam Seed Reza, Soltani Reza, Seyed Jafari Seyed Hamid (2018)., Journal of Magnesium and Alloys, 1(1), 1.  
  
**16.** Tribological properties of B 4 C reinforced aluminum composite coating produced by TIG re-melting of flame sprayed Al-Mg-B 4 C powder. Zabihi Amir Hossein, Soltani Reza (2018)., SURFACE & COATINGS TECHNOLOGY, 349(SEP), 707-718.  
  
**17.** Study on corrosion behavior of nano-structured coatings developed on biodegradable as cast Mg–Zn–Ca alloy by plasma electrolyte oxidation. Shahri Zahra, Allah Karam Seed Reza, Soltani Reza, Jafari H (2018)., SURFACE & COATINGS TECHNOLOGY, 347(AUG), 225-234.  
  
**18.** Effect of Direct Current Field on Powder-Pack Chromizing of AISI 1045. جان نثاری عماد, Soltani Reza, Heydarzadeh Sohi Mahmoud (2018)., sath, 36(2), 57-63.  
  
**19.** Evaluation of niobium carbide coatings produced on AISI L2 steel via thermo-reactive diffusion technique. Soltani Reza, Heydarzadeh Sohi Mahmoud, Ansari Mohammad, Ghasemi Monfared Rad Hamid Reza, Haftlang Farahnaz, Haghighi Ahmadreza (2017)., VACUUM, 146(1), 44-51.  
  
**20.** Effect of APS process parameters on high-temperature wear behavior of nickel–graphite abradable seal coatings. Soltani Reza, Heydarzadeh Sohi Mahmoud, Valefi Zia, [] [], Ansari Mohammad (2017)., SURFACE & COATINGS TECHNOLOGY, 321(-), 403-408.  
  
**21.** High temperature oxidation resistance of plasma sprayed and surface treated YSZ coating on Hastelloy X. Karimi Abbas, Soltani Reza, Ghambari Mohammad, فلاح دوست میلاد (2017)., SURFACE & COATINGS TECHNOLOGY, 321(-), 378-385.  
  
**22.** The microstructure, texture, and room temperature mechanical properties of friction stir processed Mg-Y-Nd alloy. Jamili Amirmohammad, Zarei Hanzki Abbas, Abedi Hamid Reza, Soltani Reza, Minarik P.. (2017)., MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING, 690(1), 244-253.  
  
**23.** Effect of laser treatment on the corrosion behavior of AZ31 Mg alloy pre-sprayed by WC-Co-Cr powder. Karimzadeh Khoee Mehran, Soltani Reza, Heydarzadeh Sohi Mahmoud (2016)., sath, 12(29), 45-54.  
  
**24.** Laser surface treatment of AZ91 magnesium alloy presprayed with WC–Co. Mehrjoo Babak, Soltani Reza, Heydarzadeh Sohi Mahmoud, Torkamany Mohammad Javad, Valefi Zia, Ghorbani Hassan (2016)., SURFACE ENGINEERING, 32(12), 893-901.  
  
**25.** The effects of bimodal grain size distributions on the work hardening behavior of a TRansformation-TWinning Induced Plasticity steel. Eskandari Sabzi Hossein, Zarei Hanzki Abbas, Abedi Hamid Reza, Soltani Reza, Mateo Adsf, Roa J.j. (2016)., MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING, -(-), -.  
  
**26.** Effect of Aluminum Content in Pack Cementation Mixture on Microstructure and Cyclic Oxidation Performance of Zr-modified Aluminide Coatings. Khakpour Iman, Soltani Reza, Heydarzadeh Sohi Mahmoud (2016)., New Products, 6(3), 19-30.  
  
**27.** Pulsed Nd:YAG laser surface alloying of AZ31 magnesium with nickel for improved wear and corrosion resistance. Ansari Mohamadali, Ramezani Hadi, Yari Saeid, Soltani Reza (2016)., JOURNAL OF LASER APPLICATIONS, 28(1), 012013.  
  
**28.** Microstructural and Hardness Study of Pulsed Nd:YAG Laser Surface Alloyed Aluminum with Iron. Ansari Mohammad, Soltani Reza, Heydarzadeh Sohi Mahmoud, Valefi Z. (2016)., METALLURGICAL AND MATERIALS TRANSACTIONS A-PHYSICAL METALLURGY AND MATERIALS SCIENCE, 47(4), 1698-1704.  
  
**29.** The Effects of bimodal grain size distributions on the work hardening behavior of a TRansformation-TWinning Induced Plasticity steel. Zarei Hanzki Abbas, Eskandari Sabzi Hossein, Abedi Hamid Reza, Soltani Reza, G.G. Mateos, Pong Wong Roa (2016)., MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING, -(-), -.  
  
**30.** Effect of pulsed Nd:YAG laser re-melting on chromium surface alloyed AA6061-T6 aluminum. Ansari Mohammad, Heydarzadeh Sohi Mahmoud, Soltani Reza, Torkamany Mohammad Javad (2015)., INTERNATIONAL JOURNAL OF ADVANCED MANUFACTURING TECHNOLOGY, 83(1-4), 285-291.  
  
**31.** Liquid phase surface engineering of aluminum (AA6061) with Cr predeposited layer by pulsed Nd-YAG laser. Ansari Mohammad, Soltani Reza, Heydarzadeh Sohi Mahmoud (2014)., sath, 20(20), 39-45.

***Books***

***Conferences***

**1.** Evaluation of corrosion resistance of chitosan / hydroxyapatite nano coating on titanium alloy via electrophoretic deposition method. نوربخش ریزی مهدی, محمد صادق علی, Soltani Reza, Omidvar Hamid (2022)., 20th National Congress of Corrosion, 22-24 February, Tehran, IRAN.  
  
**2.** Thermal insulation capability and adhesion strength of thick thermal barrier coatings. Izadinia Mohamad, Bayati Ali, Soltani Reza, [] [] (2020)., 9th International Conference & Exhibition on Materials Science & Metallurgical Engineering (iMat2020), 10-11 November, Tehran, Iran.  
  
**3.** Li ion conductive coating for Li ion batteries. [] [], Soltani Reza (2020)., 9th International Conference & Exhibition on Materials Science & Metallurgical Engineering (iMat2020), 10-11 November, Tehran, Iran.  
  
**4.** Optimizing and modeling of MAO coatings by means of ANNs and DoE methods. Shahri Zahra, Allah Karam Seed Reza, Soltani Reza, Jafari Hassan (2018)., 7th Interantional Conference on Materials Engineering and Metallurgy, 9-10 October, Tehran, Iran.  
  
**5.** Wear properties comparison between electroplated hard chromium and plasma nitriding of low alloy steel containing chromium and nickel. Ettelaei Maryam, Rahimi Mohammad Reza, Soltani Reza (2018)., IMAT 2018, 9-10 October, Tehran, Iran.  
  
**6.** Surface characterization of nano MAO coatings on an Mg alloy. Shahri Zahra, Allah Karam Seed Reza, Soltani Reza, Jafari Hassan (2018)., 7th Interantional Conference on Materials Engineering and Metallurgy, 9-10 October, Tehran, Iran.  
  
**7.** Study of the Microstructure an corrosion behavior of chromized steel. Jan nesary Emad, Abassi Saeed, Heydarzadeh Sohi Mahmoud, Soltani Reza (2017)., 17th national conference on surface engineering, 31 January-2 February, Isfahan, Iran.  
  
**8.** Formation and characterization diffused layer containing chromium and aluminum on steel. Jan nesary Emad, Abassi Saeed, Heydarzadeh Sohi Mahmoud, Soltani Reza (2017)., 17th national conference on surface engineering, 31 January-2 February, Isfahan, Iran.  
  
**9.** Evaluation of lubricity and pressureability performance of drilling mud based on nano additives. Soltani Reza, Alaei Mahshid, Soltani Mohammad, Raayatdoost Saedeh, Akhlaghi Mohammad Hosein (2016)., international conference on materials engineering and metallurgur iMat 2016, 8-9 November, Shiraz, Iran.  
  
**10.** Surface melting of Al-based metal matrix coating with presence of B4C particles by Gas Tungsten Arc welding (GTAW). Zabihi Amir Hossein, Soltani Reza, Alizadeh Ali (2016)., international conference on materials engineering and metallurgur iMat 2016, 8-9 November, Shiraz, Iran.  
  
**11.** Effect of TIG surface melting on microstructure and wear properties of flame-sprayed Al-B4C composite coatings on Al-Mg. Zabihi Amir Hossein, Soltani Reza, Alizadeh Ali (2016)., international conference on materials engineering and metallurgur iMat 2016, 8-9 November, Shiraz, Iran.  
  
**12.** Comparison between tribology performance improvement of Zinc Borate and TiO2 nanostructures as lubricating additive in water-based drilling fluids. Rastegar Moghaddam Hosna, Alaei Mahshid, Soltani Reza, Soleymani Mohammad, ابراهیم رایتاد (2016)., The 6th International Conference on Nanostructures (ICNS6), 7-10 March, Kish, Iran.  
  
**13.** Microstructure and High Temperature Oxidation behaviour of Zr-doped Aluminide Coatings fabricated on Nickel-based Super Alloy. Khakpour Iman, Soltani Reza, Heydarzadeh Sohi Mahmoud (2015)., Ultrafine Grained and Nano-Structured Materials, 11-12 November, Tehran, Iran.  
  
**14.** A Comparison study on the direct and pulsed voltage electrodeposition of CNTs reinforced hydroxyapatitie coatings on AZ31 magnesium alloy. Khazeni Dena, Saremi Mohsen, Soltani Reza (2014)., 10th Annual Electrochemistry Seminar of Iran, 26-27 November, Tehran, Iran.  
  
**15.** A comparative study on long term corrosion of direct and pulsed voltage electrodeposition of CNTs/HA coating on AZ31 magnesium alloy. Khazeni Dena, Saremi Mohsen, Soltani Reza (2014)., 10th Annual Electrochemistry Seminar of Iran, 26-27 November.  
  
**16.** Effect of laser treatment on the hardness and corrosion behavior of pure Mg pre-coated by WC-Co-Cr layer. کریم زاده مهران, Soltani Reza, Heydarzadeh Sohi Mahmoud (2014)., The 8th joint congress of Iranian Metallurgical Engineering Society & Iranian Foundrymen’s society, 18-19 November, Tehran, Iran.  
  
**17.** TIG surface remelting of thermal barreir coating produced by plasma spraying. کریمی عباس, Soltani Reza, Ghambari Mohammad, محمدپور امینی مصطفی (2014)., The 8th joint congress of Iranian Metallurgical Engineering Society & Iranian Foundrymen’s society, 18-19 November, Tehran, Iran.  
  
**18.** Laser surface alloying of aluminum with chromium powder by pulsed Nd:YAG laser. Ansari Mohammad, Heydarzadeh Sohi Mahmoud, Soltani Reza, Torkamani Mohammad Javad (2014)., Iran International Aluminum Conference (IIAC2014), 25-26 May, Tehran, Iran.  
  
**19.** The Effect of Aluminum Activity on the Properties of Modified Aluminide Coatings Produced by Pack Cementation Process on IN738. Khakpour Iman, Soltani Reza, Heydarzadeh Sohi Mahmoud, Bozorg Nezhad Nobijari Mahdi (2014)., Iran Internati onal Aluminum Conference (IIAC2014), 25-26 May, Tehran, Iran.  
  
**20.** Pulsed Nd:YAG laser surface melting of AZ91 pre-sprayed with WC- Co. Mehrjoo Babak, Soltani Reza, Heydarzadeh Sohi Mahmoud, Torkamany Mohammad Javad (2014)., 20th Iranian Optic and Photonic Conference, 28-30 January, Shiraz, Iran.  
  
**21.** Laser surface treatment of AZ91 cast alloy with Cobalt base WC powder using pulsed Nd-YAG laser. Mehrjoo Babak, Soltani Reza, Heydarzadeh Sohi Mahmoud, Torkamani Mohammad Javad (2013)., The Second Internationl and the Seventh Joint conference of Iranian Metallurgical Engineering and Iranian Foundryman Scientific Societies, 30-31 October, Iran.  
  
**22.** Pulsed Nd-YAG laser surface melting of AZ91 pre-sprayed with WC- Co. Mehrjoo Babak, Heydarzadeh Sohi Mahmoud, Soltani Reza, Torkamany Mohammad Javad (2013)., The second International and The seventh joint Conference of Iranian Metallurgical engineering and Iranian Foundrymen, 29-31 October, seoul, Iran.  
  
**23.** Laser surface alloying of aluminum (AA6061) with Ni and Cr pre-coated layer. Ansari M.r, Soltani Reza, Heydarzadeh Sohi Mahmoud (2013)., 14th National Seminar on Surface Engineering, 8-9 October, Isfahan, Iran.  
  
**24.** Development of diffusion coatings for gas turbine blades. Khakpour Iman, Soltani Reza, Heydarzadeh Sohi Mahmoud, Ahmadkhaniha Donya (2013)., Second National Seminar on Gas Turbines, 28-29 May, Tehran, Iran.

**HONORS and AWARDS**

**ACADEMIC POSITIONS**

**COURSES OFFERED**

**Advanced Surface Engineering  
  
Failure Analysis  
  
Technical English  
  
Failure Analysis  
  
Surface Engineering  
  
Advanced Surface Engineering  
  
Crystallography  
  
Corrosion Lab.  
  
Corrosion Lab.  
  
Corrosion Lab.  
  
Advanced Corrosion Laboratory  
  
Advanced Surface Engineering  
  
Technical English  
  
Corrosion Lab.  
  
Corrosion Lab.  
  
Corrosion Lab.  
  
Crystallography  
  
Surface Engineering  
  
Corrosion Lab.  
  
Corrosion Lab.  
  
Corrosion Lab.  
  
Advanced Corrosion Laboratory  
  
Advanced Surface Engineering  
  
Technical English  
  
Crystallography  
  
Surface Engineering  
  
Advanced Surface Engineering  
  
Technical English  
  
Creep  
  
Crystallography  
  
Surface Engineering  
  
General Training  
  
Advanced Surface Engineering  
  
Technical English  
  
Creep  
  
Crystallography  
  
Technical English  
  
General Training  
  
Advanced Surface Engineering  
  
Surface Engineering  
  
Creep  
  
Crystallography  
  
Technical English  
  
General Training  
  
Surface Engineering  
  
Surface Engineering  
  
Creep  
  
Crystallography  
  
Technical English  
  
General Training  
  
Crystallography  
  
Surface Engineering  
  
Surface Engineering  
  
Creep  
  
Crystallography  
  
Technical English  
  
General Training  
  
Crystallography  
  
Surface Engineering  
  
Surface Engineering  
  
Creep  
  
Crystallography  
  
General Training  
  
Surface Engineering  
  
Technical English  
  
Creep  
  
Crystallography  
  
General Training  
  
Surface Engineering  
  
Technical English  
  
Creep  
  
Technical English  
  
General Training  
  
Creep**

**LABORATORIES**