Abbas Sadeghzadeh-Attar, PhD

Personal Detail

Current position: Associate Professor, Department of Metallurgy and Materials Engineering, Kashan University

Previous Position: Assistant Professor, Department of Metallurgy and Materials Engineering, Shahid Bahonar Kerman University

Primary Address: Kashan University, Department of Metallurgy and Materials Engineering, P.O. Box. 87317–53153, Ghotb Ravandi Blvd., Kashan, Iran.

Tel (office): (098) 31-55912492

Fax (office): (098) 31-55912424

E-mail: sadeghzadeh@kashanu.ac.ir

Website: https://faculty.kashanu.ac.ir/sadeghzadeh

Education

Ph.D. in Materials Science and Engineering, Iran University of Science & Technology (IUST), Tehran, Iran **(2003-2009)**

M.Sc. in Metallurgy and Materials Engineering, University of Tehran (UT), Iran **(2000-2003)**

B.Sc. in Materials Engineering, Isfahan University of Technology (IUT), Iran **(1996-2000)**

Professional Experience:

2001-2003

Research and teaching assistant in heat treatment laboratory, Department of Metallurgy and Materials Engineering, University of Tehran (UT), Iran

2002-2003

Research project was involved with the *Corrosion protection of galvanized and chromated distorted coats,* Department of Metallurgy and Materials Engineering, University of Tehran and SAPCO, Tehran, Iran

2007-2008

Research student within "*synthesis of TiO_2 nanorods by sol-gel template process*" by Professor K. Koumoto in Department of Applied Chemistry, Graduate School of Engineering, Nagoya University, Nagoya, Japan.

Publications

THESES

Ph.D. "I*nvestigation of the effect of processing parameters on the microstructure of TiO_2 nanorods"*, under supervision of Dr. Sh. Mirdamadi and Dr. F. Hajiesmaeilbaigi, Iran University of Science and Technology, Tehran, Iran (2009).

M.Sc. "*Investigation of bainitic transformation process in microalloyed cast steels"*, under supervision of Dr. J. RassizadehGhani, University of Tehran, Tehran, Iran (2003).

B.Sc. "*The effective parameters on chill depth in cast iron"*, under supervision of Dr. B. Niroumand, Isfahan University of Technology, Isfahan, Iran (2000)

JOURNAL PUBLICATIONS

1. Houman Niknam, **A. Sadeghzadeh-Attar**, "*Constructing trinary heterostructure of $TiO_2/CoCr_2O_4/SrTiO_3$ to enhance photocatalytic activity toward degradation of yellow 28 dye*", Materials Chemistry and Physics 299 (2023) 127489.
2. Hooman Niknam, **A. Sadeghzadeh-Attar**, "*Mg-doped TiO_2 nanorods-$SrTiO_3$ heterojunction composites for efficient visible-light photocatalytic degradation of basic yellow 28*", Optical Materials 136 (2023) 113395.
3. S. Kafian, **A. Sadeghzadeh-Attar**, "*Photocatalytic degradation of Basic Blue 41 dye under visible light over $SrTiO_3/Ag_3PO_4$ hetero-nanostructures*", International Journal of Applied Ceramic Technology 19 (2022) 3347-3357.
4. M. Harooni, **A. Sadeghzadeh-Attar,** "*Enhanced dielectric properties and energy storage density of Mg-doped $SrTiO_3$ nanowire films*", Processing and Application of Ceramics 16 (2022) 55-63.
5. J. Didari, **A. Sadeghzadeh-Attar**, "*Ni-N codoped SnO_2/Fe_2O_3 nanocomposite as advanced bifunctional photocatalyst for simultaneous photocatalytic redox conversion of Cr(VI) and As(III)*", Journal of the Taiwan Institute of Chemical Engineers 119 (2021) 232-244.
6. A. **Sadeghzadeh-Attar**, *"Enhanced photocatalytic hydrogen evolution by novel Nb-doped SnO_2/V_2O_5 heteronanostructures under visible light with simultaneous basic red 46 dye degradation",* Journal of Asian Ceramic Societies 8 (2020) 662-676.
7. **A. Sadeghzadeh-Attar**, *"Boosting the photocatalytic ability of hybrid $biVO_4$-TiO_2 heterostructure nanocomposites for H_2 production by reduced graphene oxide (rGO)",* Journal of the Taiwan Institute of Chemical Engineers 111 (2020) 325-336.
8. **A. Sadeghzadeh-Attar**, *"Binary Zn-Doped SnO_2/Al_2O_3 Nanotube Composites for Visible-Light-Driven Photocatalytic Degradation of Basic Blue 41"*, ACS Applied Nano Materials 3 (2020) 9931-9942.
9. M.J. Fakharian-Qomi, **A. Sadeghzadeh-Attar**, *"Template Based Synthesis of Plasmonic Ag-modified TiO_2/SnO_2 Nanotubes with Enhanced Photostability for Efficient Visible-Light Photocatalytic H_2 Evolution and RhB Degradation"*, ChemistrySelect 5 (2020) 6001-6010.
10. M.J. Namayandeh, M. Mohammadimehr, M. Mehrabi, **A. Sadeghzadeh-Attar**, "*Temperature and thermal stress distributions in a hollow circular cylinder composed of anisotropic and isotropic materials*", Advances in Materials Research 9 (2020) 15-32.
11. **A. Sadeghzadeh-Attar**, "*Photocatalytic degradation evaluation of N-Fe codoped aligned TiO_2 nanorods based on the effect of annealing temperature*", Journal of Advanced Ceramics 9 (2020) 107-122.
12. **A. Sadeghzadeh-Attar**, "*Preparation and enhanced photocatalytic activity of Co/F codoped tin oxide nanotubes/nanowires: a wall thickness-dependence study*", Applied Physics A 125 (2019) 768.
13. **A. Sadeghzadeh-Attar**, M.R. Bafandeh, "*Effect of annealing on UV-visible absorption and photoluminescence behavior of liquid phase deposited TiO_2 nanorods"*, International Journal of Applied Ceramic Technology 16 (2019) 2429-2440.
14. **A. Sadeghzadeh-Attar,** "*Dielectric Properties of Nanostructured $Bi_4Ti_3O_{12}$ and $Bi_{12}TiO_{20}$ Films Prepared by Sol-Gel Method*", Journal of Metallurgical and Materials Engineering 30 (2019) 29-42. (In Persian)
15. **A. Sadeghzadeh-Attar**, M.R. Bafandeh, "*The effect of annealing temperature on the structure and optical properties of well-aligned 1D SnO_2 nanowires synthesized using template-assisted deposition*", CrystEngComm 20 (2018) 460-469.

16. **A. Sadeghzadeh-Attar**, I. Akhavan-Safaei, M.R. Bafandeh, "*UV-visible absorption and photoluminescence characteristics of SnO_2 nano-tube/wire arrays fabricated by LPD method*", International Journal of Applied Ceramic Technology 15 (2018) 1084-1094.
17. **A. Sadeghzadeh-Attar**, "*Efficient photocatalytic degradation of methylene blue dye by SnO_2 nanotubes synthesized at different calcination temperatures*", Solar Energy Materials and Solar Cells 183 (2018) 16-24.
18. **A. Sadeghzadeh-Attar**, S. Hajijafari-Bidgoli, M.R. Bafandeh, "*Structure and dielectric behaviour of Sr-modified $Bi_4Si_3O_{12}$ thin films prepared via sol gel method"*, Processing and Application of Ceramics 12 (2018) 36-44.
19. **A. Sadeghzadeh-Attar**, S. Hajijafari-Bidgoli, M.R. Bafandeh, "*Structural and optical properties of Sr-modified bismuth silicate nanostructured films synthesized by sol gel method"*, Journal of Nanostructures 7 (2017) 258-265.
20. **A. Sadeghzadeh Attar,** E. Salehi Sichani, S. Sharafi, "*Structural and dielectric properties of Bi-doped barium strontium titanate nanopowders synthesized by sol-gel method*", Journal of Materials Research and Technology 6 (2017) 108-115.
21. **A. Sadeghzadeh-Attar,** "*Structural and optical characteristic of single crystal rutile-titania nanowire arrays prepared in alumina membranes*", Materials Chemistry and Physics 182 (2016) 148-154.
22. **A. Sadeghzadeh-Attar**, G. AyubiKia, M. Ehteshamzadeh, "*Improvement in tribological behavior of novel sol-enhanced electroless Ni-P-SiO_2 nanocomposite coatings*", Journal of Surface & coatings Technology 307 (2016) 837-848.
23. **A. Sadeghzadeh Attar,** Z. Hassani, "*Fabrication and growth mechanism of single-crystalline rutile TiO_2 nanowires by liquid-phase deposition process in a porous alumina template*", Journal of Materials Science & Technology 31 (2015) 828-833.
24. Z. Ansari, M. Alizadeh, **A. Sadeghzadeh Attar**, "*Synthesis and corrosion behavior of mixed metal oxides Al_2O_3-MgO-TiO_2 coatings on aluminum substrate*", Journal of Advanced Materials in Engineering 33 (2014) 17-30. (In Persian)
25. Z. Ansari, M. Alizadeh, **A. Sadeghzadeh Attar**, "*Evaluation of Corrosion Behavior of Al_2O_3/MgO/TiO_2 Mixed Metal Oxides Coating Synthesized by Sol-Gel Method in Chloride solution*", Journal of Metallurgical and Materials Engineering 25 (2014) 37-48. (In Persian)
26. **A. Sadeghzadeh Attar,** M. Sasani Ghamsari, F. Hajiesmaeilbaigi, S. Mirdamadi, K. Katagiri, K. Koumoto, "*Sol-gel template synthesis and characterization of aligned anatase-TiO_2 nanorod arrays with different diameter*", Materials Chemistry and Physics 13 (2009) 856-860.
27. **A. Sadeghzadeh Attar**, M. Sasani Ghamsari, F. Hajiesmaeilbaigi, S. Mirdamadi, K. Katagiri, K. Koumoto, "*Synthesis and characterization of anatase and rutile TiO_2 nanorods by template-assisted method*", Journal of Materials Science 43 (2008) 5924-5929.
28. **A. Sadeghzadeh Attar**, M. Sasani Ghamsari, F. Hajiesmaeilbaigi, S. Mirdamadi, K. Katagiri, K. Koumoto, "*Study on the effects of complex ligands in the synthesis of TiO_2 nanorod arrays using the sol-gel template method*", Journal of Physics D: Applied Physics 41 (2008) 155318.
29. **A. Sadeghzadeh Attar**, M. Sasani Ghamsari, F. Hajiesmaeilbaigi, S. Mirdamadi, "*Modifier ligands effects on the synthesized TiO_2 nanocrystals*", Journal of Materials Science 43 (2008) 1723-1729.
30. **A. Sadeghzadeh Attar**, S. Mirdamadi, F. Hajiesmaeilbaigi, M. Sasani Ghamsari, "*Growth of TiO_2 nanorods by sol-gel template process*", Journal of Materials Science and Technology 23 (2007) 611-613.

31. **A. Sadeghzadeh Attar**, M. Sasani Ghamsari, F. Hajiesmaeilbaigi, Sh. Mirdamadi, "*Template-based growth of TiO_2 nanorods by sol-gel*", Semiconductor Physics, Quantum Electronics & Optoelectronics 10 (2007) 36-39.
32. **A. Sadeghzadeh Attar**, J. Rassizadehghani, "*Effect of bainitic microstructure on mechanical properties of microalloyed cast steels*", Journal of College of Engineering, University of Tehran 40 (2007) 943-951. (In Persian)
33. **A. Sadeghzadeh Attar**, J. Rassizadehghani, "*Effect of V, Ti and B on microstructure and mechanical properties of austempered microalloy cast steels*", Journal of Casting 74 (2003) 24-29. (In Persian)
34. R. Hosseini, M. Parsa, **A. Sadeghzadeh Attar**, A.M. Amadeh, S.R. Allahkaram, "*Investigation of corrosion protection galvanized and chromated distorted coats*", Journal of Iranian Corrosion Association 13-14 (2003) 18-22. (In Persian)

CONFERENCE PROCEEDINGS

1. H. Niknam, **A. Sadeghzadeh-Attar**, "*The effect of calcination temperature on the structural and dielectrical properties of Sr0.85Mg0.15TiO3 thin films synthesized by liquid phase deposition method on the alumina substrates",* 9th International Conference on Materials and Metallurgical Engineering (iMat), Tehran, Iran, 10-11 November 2020.
2. Majid Moradi-Arani, **Abbas Sadeghzadeh-Attar,** "*Effect of Mg Doping on Dielectric Properties of Lead Zirconate Tianate ($PbZr_{0.52}Ti_{0.48}O_3$) Synthesized by Sol-Gel Process",* 19th National Seminar on Surface Engineering, Isfahan University of Technology, Iran, 13-14 February 2019.
3. M. Givi, A. Cheraghi, M. Abbasi, R. Hamzeloo, **A. Sadeghzadeh**, "*Developing grain refinement and superplasticity in an Al 7075 alloy processed by high-pressure torsion*", 7th International Conference on Materials and Metallurgical Engineering (iMat), Tehran, Iran, 9-10 October 2018.
4. M. Harooni, **A. Sadeghzadeh-Attar**, "*Characterization and study on dielectric behavior of Mg-doped strontium titanate thin films",* 7th International Conference on Materials and Metallurgical Engineering (iMat), Tehran, Iran, 9-10 October 2018.
5. M.J. Fakharian-Qomi, **A. Sadeghzadeh-Attar**, "*Preparation of TiO_2 thin films by liquid phase deposition on the aluminum oxide substrates and study of their optical properties*", 18th *National* Seminar on Surface Engineering & 4th Conference on Laser Material Processing, Isfahan, Iran, 13-14 February 2018.
6. B. Asadollahi, **A. Sadeghzadeh-Attar**, "*Investigation on dielectric properties of barium titanate thin films prepared by liquid phase deposition*", 18th National Seminar on Surface Engineering & 4th Conference on Laser Material Processing, Isfahan, Iran, 13-14 February 2018.
7. M.J. Fakharian-Qomi, **A. Sadeghzadeh-Attar**, "*Optical properties of nonporous SnO_2 thin films prepared by liquid phase deposition technique*", 6th International Conference on Materials and Metallurgical Engineering (iMat), Tehran, Iran, 28-29 November 2017.
8. A. Ebrahimi, **A. Sadeghzadeh-Attar**, "*Characterization of nanostructured TiO_2/SiO_2 coatings synthesised by sol-gel process for hydrophobic applications*", 17th National Seminar on Surface Engineering, Isfahan University of Technology, Iran, 31 January and 1-2 February 2017.
9. J. Shirazinejad, **A. Sadeghzadeh-Attar**, O. Bahrami, "*Synthesis and dielectric properties of magnesium-doped $Ba_{0.5}Sr_{0.5}TiO_3$ nanopowders*", 5th International Conference on Materials and Metallurgical Engineering (iMat), University of Shiraz, Iran, 8-9 November 2016.

10. O. Bahrami, **A. Sadeghzadeh-Attar**, J. Shirazinejad, "*Synthesis and characterization of nanostructured $Al_2O_3/MgO/SiO_2$ mixed metal oxides coating by sol-gel method on the St37 steel*", 5th International Conference on Materials and Metallurgical Engineering (iMat), University of Shiraz, Iran, 8-9 November 2016.
11. M. Zareie, **A. Sadeghzadeh-Attar**, "*Synthesis and study of the structural and dielectric properties of Sr-doped lead zirconate titanate nanopowders*", 5th International Conference on Materials and Metallurgical Engineering (iMat), University of Shiraz, Iran, 8-9 November 2016.
12. I. Akhavan Safaei, **A. Sadeghzadeh Attar**, "*Fabrication and characterization of ordered SnO_2 nanotube arrays by liquid phase deposition method*", 4th International Conference on Materials and Metallurgical Engineering (iMat), Iran University Science and Technology, Iran, 10-11 November 2015.
13. S. Hajijafari Bidgoli, **A. Sadeghzadeh Attar**, "*Characterization and dielectric behavior of Sr-doped $Bi_4Si_3O_{12}$ nanostructured films prepared by sol-gel process*", 4th International Conference on Materials and Metallurgical Engineering (iMat), Iran University Science and Technology, Iran, 10-11 November 2015.
14. I. Akhavan Safaei, **A. Sadeghzadeh Attar**, "*Effect of reaction time on the microstructure of SnO_2 nanowires prepared by using alumina templates*", The Conference on Many-Body Systems (Bulk and Nano-scale), K.N. Toosi University of Technology, Tehran, 12 November 2015.
15. S. Hajijafari Bidgoli, **A. Sadeghzadeh Attar**, "*Synthesis and evaluation of the structural and optical properties of Sr-doped bismuth silicate nanostructured films*", The Conference on Many-Body Systems (Bulk and Nano-scale), K.N. Toosi University of Technology, Tehran, 12 November 2015.
16. M. Yazdani, GH. Akbari, **A. Sadeghzadeh Attar**, "*Effect of solution temperature on the growth of TiO_2 nanotubes on alumina template*", The first National Conference of Chemistry, Chemical Engineering and Technology, Arak University, Iran, March 2014.
17. Z. Ansari, M. Alizadeh, **A. Sadeghzadeh Attar**, M. Talebian, "*Study of corrosion behavior of mixed metal oxides $Al_2O_3/MgO/TiO_2$ prepared by sol-gel method in media containing chloride ions*", 14th National Corrosion Congress, University of Tehran, Iran, 14-16 May 2013.
18. E. Salehi Sichani, S. Sharafi, **A. Sadeghzadeh Attar**, "*Synthesis and characterization of nanostructured barium titanate-bismuth - strontium by sol-gel*", 2th International Conference on Materials and Metallurgical Engineering (iMat), Semnan University, Iran, 30-31 November 2013.
19. Y. Ghahari, S. Sharafi, **A. Sadeghzadeh Attar**, "*Synthesis and characterization of $Ba_{0.5}Sr_{0.5}TiO_3$ nanocrystals prepared by sol-gel method*", Second Mining Industry Conference, Shahid Bahonar Kerman University, Kerman, Iran, October 2012.
20. R. Yazdani, M. Zandrahimi, **A. Sadeghzadeh Attar**, "The synthesis and microstructure characterization of nanostructured thin layer of bismuth titanate by sol-gel method", Joint First International Conference and sixth Metallurgical Engineers Society Conference, October 2012.
21. **A. Sadeghzadeh Attar**, MS Ghamsari, F Hajiesmaeilbaigi, S Mirdamadia, K Katagiri, "Preparation and characterization of aligned TiO_2 nanorod arrays by template sol-gel methods", International Conference on Nanotechnology: Opportunities and Challenges, 2008.
22. **A. Sadeghzadeh Attar**, M. Sasani Ghamsari, F. Hajiesmaeilbaigi, Sh. Mirdamadi, "*Template-based growth of TiO_2 nanorods by sol-gel*", First International Congress on Nanoscience and Nanotechnology, Faculty of Engineering , University of Tehran, Iran, 18-20 December, 2006.
23. **A. Sadeghzadeh Attar**, J. Rassizadehghani, "*The effect of various heat treatment parameters on mechanical properties of microalloyed cast steels*", 7th Annual Congress of Metallurgy Engineering Association, Sharif University of Technology, Tehran, Iran, 2003.

24. **A. Sadeghzadeh Attar**, J. Rassizadehghani, "*Effect of vanadium, titanium and boron on microstructure and mechanical properties of austempered microalloy cast steels*", 15th Annual Seminar of Iranian Casting Society, University of Tehran, Tehran, Iran, 2003.
25. R. Hosseini, M. Parsa, **A. Sadeghzadeh Attar**, A.M. Amadeh, S.R. Allahkaram, "*Investigation of corrosion protection galvanized and chromated distorted coats*", 8th National Congress on Corrosion, University of Tehran, Tehran, Iran, 2003, PP. 403-413.
26. **A. Sadeghzadeh Attar**, J. Rassizadehghani, "*The effect of temperature and time of austempering on microstructure and mechanical properties microalloyed cast steels*", 5th National Congress of Surface Engineering and Heat Treatment, Polytechnic University, Tehran, Iran, 2003, PP. 569-580.
27. **A. Sadeghzadeh Attar**, J. Rassizadehghani, "*The effect of heat treatment parameters on microstructure of V-Ti-B microalloyed cast steels*", Symposium of Steel, Isfahan University of Technology, Isfahan, Iran, 2003, PP. 456-466.