

GENERAL INFORMATION

Title: Prof. Dr.

First name: Abdolreza (Arash)

Family name: Simchi

Affiliation: Department of Materials Science and Engineering, Sharif University of Technology

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Webpage: <http://cnam.ir>

Google Scholar: <https://scholar.google.com/citations?user=McKtXdwAAAAJ&hl=en>

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EDUCATION

Ph.D. in Materials Science and Engineering Department, Sharif University of Technology, 2001

- Area of Specification: Advanced Materials

AWARDS and HONORS

A) International

- George Foster Research Award for the Lifetime Teaching and Research Achievement, Alexander von Humboldt Foundation, Bonn, Germany, August 2020
- Ranked as 1% Top World Scientists based on Citation, IST Web of Science, 2012-2019
- The Royal Society Fellowship, UK, February 2009 to May 2009.
- Best Paper Award, Second Yellow Sea Rim Workshop on Explosion, Combustion and other Energetic Phenomena, Kumamoto University, Kumamoto, Japan, September 9-10, 2008.
- Materials Award, European Powder Metallurgy Association (EPMA). Shared with Dr. F. Petzoldt and Dr. H. Pohl for Developing and patenting a New Material, named LaserTool, for Direct Metal Laser Sintering. October 2003.
- World Intellectual Property Organization (WIPO) Award (Gold Medal and Certificate) as the Best Young Inventor, United Nations Organization, February 2003
- Kharazmi International Award: Bestowed by sitting President of the Republic of Iran, Dr. Seyed Mohammad Khatami, February 2003.
- George Forester Fellowship for Scientist of Developing Countries, Alexander von Humboldt Foundation, Bonn, Germany, April 2000 to April 2001.
- Fraunhofer Institute Research Fellowship, Bremen, Germany, August 1999 to March 2000.

B) National

- Nationwide Distinguished Professor: Bestowed by sitting Minister for Science and Technology, Prof. Dr. Gholami, August 2021.
- Allame Tabatabaie Prize, National Elite Foundation: Bestowed by sitting President of the Republic of Iran, Dr. Hassan Rouhani, May 2014.
- Nationwide Distinguished Researcher: Bestowed by sitting Vice-President of the Republic of Iran in Science, Research and Technology, Prof. Dr. Farji-Dana, November 2013.
- Nano Award 2012 (ranked as Top 10 in Nanoscience and Nanotechnology by the Iranian Nanotechnology Initiative Council): Bestowed by sitting Vice-President of the Republic of Iran in Science, Research and Technology, Drs. M. Soltankhah, November 2011
- Nano Award 2011 (ranked as Top 10 in Nanoscience and Nanotechnology by the Iranian Nanotechnology Initiative Council): Bestowed sitting Vice-President of the Republic of Iran in Science, Research and Technology, Drs. M. Soltankhah, November 2011.

- Nano Award 2010 (ranked as Top 10 in Nanoscience and Nanotechnology by the Iranian Nanotechnology Initiative Council): Bestowed sitting Vice-President of the Republic of Iran in Science, Research and Technology, Drs. M. Soltankhah, November 2010
- Nano Award 2009 (ranked as Top 10 in Nanoscience and Nanotechnology by the Iranian Nanotechnology Initiative Council): Bestowed sitting Vice-President of the Republic of Iran in Science, Research and Technology, Drs. M. Soltankhah, November 2009
- Distinguished Researcher of Ministry of Science, Research and Technology: Bestowed by sitting President of the Republic of Iran, November 2008
- Distinguished Researcher of Tehran Province: Bestowed by the Governor-General of Tehran Province, Prof. Dr. Kamran Daneshjo, November 2007
- Distinguished Professor of the University: Bestowed by sitting Vice Minister for Research and Technology, Prof. Dr. Mansour Kabganian, January 2007
- National Ph.D. scholarship of Ministry of Science, Research and Technology, I.R. Iran, September 1996 to June 1998.

C) Sharif University of Technology

- Distinguished Researcher Award: Bestowed by sitting University President, Prof. Dr. Mahmoud Fotuhi-Firowzabad, November 2020
- Teaching Award: Bestowed by the Board of Governors, May 2018
- Highly-cited Researcher Award: Bestowed by the sitting Vice-Presidency for Research and Technology, Prof. Dr. Mohammadreza Movahedi, December 2017
- Book Writing Award: Bestowed by the Vice-Presidency for Research and Technology, Prof. Dr. Mohammadreza Movahedi, December 2016
- Distinguished Researcher Award: Bestowed by sitting University President, Prof. Dr. Mahmoud Fotuhi-Firowzabad, November 2015
- Distinguished Researcher Award: Bestowed by sitting University President, Prof. Dr. Fotoohi Firowzabad, Prof. Mahmoud Fotuhi-Firowzabad, November 2014
- Dr. Mojtahedi Innovation Award: Distinguished Innovation in Research and Education: Bestowed by Sharif University of Technology Association (SUTA) June 2010
- Book Writing Award: Bestowed by sitting University President, Prof. Dr. Sayed Sohrapour, November 2006
- Student Teaching Award: Bestowed by the Board of Governors, May 2005
- Distinguish Professor Award: Bestowed by sitting University President, Prof. Dr. Sayed Sohrapour, February 2004
- Distinguished Researcher Award: Bestowed by sitting University President, Prof. Dr. Sayed Sohrapour, November 2003
- First-ranked Graduate Student Award in Materials Science and Engineering, Bestowed by sitting University President, Prof. Dr. Sayed Sohrapour, March 2002
- ‘Honored Graduated Student’ selected by the Alumni Association among all the graduated students of the Department in 30 Years (about 3000 students): Bestowed by sitting Chair of the Department, Prof. Dr. Amir Hussein Kokabi, May 2001
- Ranked 1st in all steps of studying including Ph.D. (1994-1999), Ph.D. General and Qualification Exams (April 1997), Ph.D. Entrance Exam (February 1994), MSc (1992-1994); MSc Entrance Exam (September 1991), and B.Sc. (1986-1991).

RESEARCH INTERESTS

Advanced Functional Materials; Biomaterials; Innovative Manufacturing Techniques; Nanomaterials

INTERNATIONAL WORK EXPERIENCES**A) Germany**

- June 2021 to September 2021: Visiting Professor, Fraunhofer Institute for Manufacturing and Advanced Materials (IFAM), Bremen, Germany.
- August 2019 to October 2019: Visiting Professor, Fraunhofer Institute for Manufacturing and Advanced Materials (IFAM), Bremen, Germany.
- June 2016 to July 2016 and August 2015 to September 2015: Visiting Professor, Max-Planck Institute for Polymer Research, Mainz, Germany.
- September 2010 to December 2010: Visiting Professor, Department of Biomaterials, Max-Planck Institute of Colloids and Interfaces, Potsdam, Germany
- July to September 2004 to 2007: Visiting Professor, Fraunhofer Institute for Manufacturing and Advanced Materials (IFAM), Germany

B) Canada

- July 2011 to September 2012: Visiting Professor, Department of Electrical and Computer Engineering, University of Toronto, Canada

C) the UK

- March 2009 to June 2009: Academic Visitor, Department of Materials, Imperial College London

D) Austria

- August 1998 to February 1999: Visiting Student, Institute for Chemical Technology of Inorganic Materials, Vienna University of Technology, Vienna, Austria

EXECUTIVE POSITIONS

- Since May 2019: Member of Faculty Promotion Committee of the University; Appointed by sitting Minister of Science, Research and Technology, Prof. Dr. Mansour Gholami
- Since November 2017: Dean of International Affairs; Appointed by sitting University President, Prof. Dr. Mahmoud Fotuhi-Firowzabad
- Since June 2017: Member of the Steering Committee for Internationalization of Iranian Universities, Ministry of Science, Research and Technology; Appointed by sitting Minister of Science, Research and Technology, Prof. Dr. Mansour Gholami
- August 2016 to December 2017: Member of Publication Committee of Engineering Sciences at the Ministry of Science, Research and Technology; Appointed by sitting Dean of Research and Technology, Dr. Sharifi.
- May 2013 to May 2018: Member of University Elite Committee, The Office of Vice President for Education Affairs; Appointed by sitting University President, Prof. Dr. Mahmoud Fotuhi-Firowzabad
- Since 2010: Editor, Scientia Nanotechnology: An international journal that publishes original papers at the forefront of Nanoscience and Nanotechnology http://www.elsevier.com/wps/find/journaldescription.cws_home/725692/description#description (ISSN: 1026-3098).
- Since 2004: Member of Research Board, Institute for Nanoscience and Nanotechnology (INST; www.inst.sharif.edu); Appointed by sitting Presidents of the University.
- 2001-2007: Consultant of Nanotechnology and Advanced Materials Groups High-Tech Industries Center, Iranian Ministry of Mining and Metals, Tehran
- 2003-2004: Advisor and Consultant of Advance Materials Investment Company (AMID), Tehran, Tehran
- 2002-2004: Vise Chair of the Research Office at the Department of Materials Science and Engineering, Sharif University of Technology; Appointed by sitting chair of the Department, Prof. Dr. Seyed Morteza Seyed Raihani

- 2001-2002: Manager of Computer Center, Department of Materials Science and Engineering, Sharif University of Technology, Tehran

MEMBERSHIP IN PROFESSIONAL ORGANISATIONS

- American Chemical Society (USA)
- Materials Research Society (USA)
- Iranian Nanotechnology Association
- Iranian Metallurgical Engineering Association

MEMBER OF EDITORIAL BOARDS OF ACCREDITED JOURNALS

- Scientia Iranica
- Advanced Ceramics (MDPI)
- Journal of Nanostructures
- Journal of Particle Science and Technology
- Advanced Materials Technologies

LANGUAGE ABILITY

- Persian: Mother's tongue
- English: Fluent verbal and written communication skills
- German: Intermediate verbal and written communication skills

FUNDED AND SUPERVISED POSTDOCTORAL RESEARCHERS

- Dr. Mohsen Saiedi, 2011-2023
- Dr. Zahra Emami, 2022-2023
- Dr. Amir Beheshti, 2021-to present
- Dr. Shervin Daneshvar e Asl, 2020-to present
- Dr. Fatemeh Mohandes, 2015-to present
- Dr. Nooshin Zandi, 2019-to present
- Dr. Mohammadreza Khodabakhsh, 2019-2021
- Dr. Maryam, Mohammadi, 2017-2020
- Dr. Bentolhoda Hadavi, 2019-2020
- Dr. Mahdi Hassanzadeh, 2018-2019
- Dr. Fatemeh-Sadat Pishbin, 2017-2018
- Dr. Amirhossein Berenjchi, 2017-2019
- Dr. Hajar Ghanbari, 2017-2018
- Dr. Masoud Brahman, 2017-2018
- Dr. Ehsan Rezvani, 2017-2018
- Dr. Ali Afshar Farnia, 2017-2018
- Dr. Amir Hatami, 2016-2018
- Dr. Niloofar Eslahi, 2016-2017
- Dr. Reza Shidpour, 2015-2016
- Dr. Farzad Khodabakhshi, 2015-2016

SUPERVISED STUDENTS**A) Ph.D.**

- S. Farahani, "Design and Fabrication of a Targeted, pH-Sensitive Core-Shell Liposomal System with the Ability to Cross the Blood-Brain Barrier for the Treatment of Glioma", 2020-2022
- A. R. Fathi, "Binder-free freestanding electrodes for flexible energy storages", 2020-2022.
- N. Bolghanabadi, "Enhanced electrochemical performance and thermal stability of heteropolyoxometalate coated Ni rich cathode toward Li-ion battery", 2020-2022.
- E. Golafshan, "Design, synthesis, and evaluation of scaffolds based on three-dimensional graphene and piezoelectric polymers for soft tissue engineering", 2018-2022.
- R. Lotfi, "Development and characterization of hydrogel composites containing 2D nanostructures as bioinks for 3D bioprinting and tissue engineering", 2018-2022.
- G. Kafili, "3D bioprinting of amniotic membrane-based nanocomposite for tissue engineering: evaluation of rheological, mechanical and biological properties", 2019-2022.
- H. Tohidi, "Synthesis and Rheological study of Electro-responsive and Injectable Hydrogel Composites for Cardiac Tissue Engineering", 2018-2022.
- A. Ramedani, "Development of a targeted theranostic delivery system based on liposomes containing graphene quantum dots and drug nanoparticles for monitoring and treatment of breast cancer", 2017-2022.
- M. Saeidi, "Flexible nanobiosensors based on 3D graphene/gold hybrids for detection of adenosine triphosphate (ATP)", 2017-2022.
- M. Mojaddami, Investigation of optoelectronic properties of BN quantum dots / TMD nanostructures used for water splitting", 2017-2021.
- S. Ayneband, "Investigation the effect of ligand exchange on the sensitivity of nanocrystal perovskite photodetectors and improve their stability by the use of 2D nanosheets", 2016-2020.
- S. Haghshenas, "The photocatalytic and photoluminescence properties of quasi core-shell ZnO-Graphene oxide nanoparticles", 2016-2019.
- N. Zandi, "Gelatin-based core-shell nanofibrous scaffold containing proteoglycan nanoparticles for control release of growth factor", 2016-2018.
- M. Mazaheri, "Fabrication of an Hybrid Graphene-Gold Nanostructured Electrode for Biosensing", 2014-2017.
- N. Mahmoudi, "Chitosan-Graphene Oxide Nanofibers for Wound Dressing: Fabrication and Biological Studies", 2012-2016.
- M.M. Tavakoli, "Surface Engineering of Colloidal Quantum Dot Solar Cells", 2012-2015.
- F. Ordikhani, "Fabrication of a Novel Drug-Eluting Three-dimensional Scaffolds for Orthopedic Application", 2011-2014.
- F. Khodabakhshi, "Stir Friction Welding of Metal Matrix Nanocomposites", 2011-2014.
- M. Mansouri, "Kinetics of Recrystallization of Amorphous Al-Ni-Fe-TM alloy", 2010-2014.
- R. Shidpour, "Design and Fabrication of Supported Au Nanocatalysts with Particulate and Mesoporous Supports and DFT Simulation of Au Nanocatalyst", 2009-2014.
- N. Mahmoudi, "Electrospinning of Chitosan/PVP/GO Nanocomposites for Skin Tissue Engineering" 2012-2014.
- H. Delavari, "Synthesis of Magnetic Nanoparticle for Hyperthermia Therapy", 2009-2012.
- M.R. Akbarpour, "Investigation of mechanical properties and thermal stability of Cu/SiC-CNTs nanocomposites", 2009-2013.
- M. Farvazi, "Synthesis and Investigation of Wear Behavior of Al₂O₃/NiTi Particulate Reinforced Nanocomposites", 2009-2013.
- H. Malaki, "Synthesis, Characterization, and Surface Engineering of Iron Oxide Nanoparticles for Cell Separation" 2009-2013.

- E. Tamjid, "Effect of Bioglass Particle Size and Titania Morphology on the Bioactivity and Kinetics of Tissue Growth in Three-Dimensional Poly(ϵ -Caprolactone) Scaffolds with Controlled Pore Structure Produced by 3D-Printing Process", 2008-2011.
- M. Mahmoudi, "Surface Engineering of Iron Oxide Nanoparticles for Drug Delivery Application", 2007-2010.
- H. Asgharzadeh, "Synthesis and Characterization of Nanocrystalline Al6061-Al2O3 Nanocomposites", 2007-2010.
- M. Dourandish, "Reaction and Interface Formation during Sinter-joining of Nanocrystalline 3Y-TZP Ceramic to Stainless Steel", 2007-2010.
- M. Rajabi, "Characterization of Rapidly Solidified Al-20Si-5Fe-M (M=Cu, Cr, Ni) Alloys Produced by Melt Spinning and Gas Atomization", 2006-2009.
- Z. Razavi Hesabi, "Effect of Reinforcement Particle Size on the Processing and Mechanical Properties of Al-Al2O3 Nanocomposites", 2004-2008.
- S. Kamani, "Effect of Reinforcement Volume Fraction on the Processing and Mechanical Properties of Al-SiC Nanocomposites", 2004-2008.

B) M.Sc.

- M. S. Adel Rastkhiz, "Photoelectrocatalytic performance of mesoporous TiO2 nanostructures hybridized with a Cu-Ag-Zn alloy for CO2 conversion", 2021-2022.
- M. Oruji, "Synthesis and characterization of cobalt-based single-atom catalysts, derived from metal-organic frameworks, for water splitting", 2021-2022.
- H. Chenani, "Investigation of Mechanical and Electrical Properties of PEDOT:PSS Composite Hydrogels for Application in Wearable Biosensors", 2021-2022.
- M. Ehsanzadeh, "Investigation on the effect of Cs_{1-x}FA_xPbI₃ QDs as an interracial layer on efficiency of perovskite solar cells", 2021-2022.
- H. Hajishafiee, "Synthesis and stabilization of cesium-based perovskite quantum dots and study of photoluminescence light emission in physiological environments", 2021-2022.
- H. Abdollahi, "Investigation of ion migration in multi-cationic perovskite solar cells and its effect on their stability", 2021-2022
- O. Bagheri, "Design and fabrication of a microfluidic system containing light-emitting quantum dots for cancer diagnoses", 2021-2022.
- P. Heidari, "Ion migration in halide perovskite quantum dots solar cells: An electrochemical study", 2021-2022.
- Ali Mohammadnezhad, "Development of hybrid porous nanocatalysts based on metal-organic frameworks for carbon dioxide conversion", 2021-2022.
- Danial Hosseini, "3D bioprinting of highly porous and hierarchal structures designed based on simulated metamaterials patterns", 2021-2022.
- Zahra Zamani, "Fabrication and characterization of photoelectrodes based on FeNiCo layered double hydroxides and tungsten trioxide for solar seawater splitting", 2020-2021.
- Vahid Kamraninezhad, "Investigation on the effect of Cs_{1-x}FA_xPbI₃ QDs as an interracial layer on efficiency of perovskite solar cells", 2020-2021.
- Morvarid Kohkhezri, "Synthesis and characterization of the polymeric composite containing two-dimensional nanostructure of MXene in tissue engineering", 2020-2021.
- Mohammadreza Kabirian, "Using copper nanocluster on copper oxide electrode for hydrogen production in water splitting", 2020-2021.
- Farzad Montazeri, "Synthesis and characterization of metal-organic frameworks as a carrier for gene-therapy applications", 2020-2021.
- Hossein Mahdavi, "Synthesis and characterization of creatinine biosensors based on metal-organic frameworks", 2020-2021.
- Nima Tabatabaee, "Synthesis and characterization of cesium-based perovskite quantum dots for optoelectronic applications", 2020-2021.

- Jafar Khanjari, "Fabrication of conductive nanographene-based systems for targeted drug delivery applications", 2020-2021.
- Z. Saadat, "Investigation of electro-optical properties of heterostructures based on 2-D layered materials by quantum simulation", 2019-2020.
- M. Hassanzadeh, "Synthesis and stability improvement of perovskite quantum dots and using in optical device", 2019-2020.
- B. Noormohammadi, "Fabrication and characterization of water splitting electrodes based on the nanostructure of hybrid carbon with hydroxide structures of Ni-Fe-Co", 2019-2020.
- Z. Robin, "Development of polymeric coating containing bioactive glass 45S5 on magnesium and investigation its biocompatibility in the simulated body fluid (SBF) ", 2018-2019.
- R. Rahmati, "Fabrication of 3D graphene/gold porous electrode for biosensing application", 2018-2019.
- A. Hemmati, "Manipulation of electronic structure in BNNS to improve catalytic and photocatalytic properties", 2018-2019.
- Z. Razzaghi, "Transport properties in heterostructures of 2D layers of graphene with WS₂ and hBN quantum dots", 2018-2019.
- S. Angizi, "Synthesis and characterization of boron nitride quantum dots using mechanical milling-solvothermal process", 2016-2017.
- A. Mamoodi, "Design and fabrication of electric field sensor for biological and corrosion currents application", 2016-2017.
- N. Bagheri, "Synthesis and characterization of graphene quantum dot/iron oxide hybrid nanoparticles", 2016-2017.
- H. Gheysari, "Preparation and characterization of hydroxyapatite nanostructures using natural resources for bone scaffold applications", 2015-2016.
- A. Tohidi, "Synthesis and characterization of hybrid smart nano hydrogel pluronic-chitosan/graphene/magnetic nanoparticles with the ability of drug release to cure cancer", 2015-2016.
- A. Azarnia, "Surface modification of bacterial cellulose-reinforced keratin nanofibers using pluronic/gum tragacanth hydrogel nanoparticles produced by concurrent gel electrospray/polymer electrospinning method", 2015-2016.
- E. Zahedi, "Electrospun core-shell PCL/Chitosan/Creatine/Aloe vera scaffolds for skin tissue engineering", 2015-2016.
- S. Soveizi, "Chemical vapor processing of 2D MoS₂ nanolayers for next-generation in optoelectronic devices: characterization and properties", 2015-2016.
- M.R. Rahmani, "Synthesis and characterization of WS₂ 2D nanolayers for next-generation optoelectronic devices", 2015-2016.
- A. M. Mohammadzadeh, "Fabrication of hybrid graphene/metal electrode for biosensor applications", 2015-2016.
- A. Nejadshalim, "Synthesis and Evaluation of Photovoltaic Properties of Lead-Halide Perovskite", 2014-2015.
- S. Akhoondi, "Synthesis, and Characterization of Hybrid of Gold Nanoparticles-Graphene Quantum Dots", 2014-2015.
- M. Ayobi, "Synthesis of Quantum Dots-Graphene Hybrids with Study of Optoelectronic and Biocompatibility Properties", 2014-2015.
- F. Kiani Shahvandi, "Deposition of Graphene on the Silicon Wafer and Investigation of its Optoelectronic and Biocompatibility Properties", 2014-2015.
- M. Abdorrahim, "Synthesis and Characterization of ATPEG-PMDA Hydrogel Including Magnetic Iron Oxide with Temperature Sensitive Coating for Artificial Cartilage Tissue Engineering", 2014-2015.

- M.H. Mirfasih, “Effect of Transition Metals on the Optoelectronic Properties of PbS Quantum Dots”, 2013-2014.
- F. Ostadhossein, “Electrospinning of Chitosan/Bacteria Cellulous/Nanodiamonds for Wound Dressing”, 2013-2014.
- M.A. Mobarhan, “Hot Deformation Behavior of Al/SiC Nanocomposites”, 2013-2014.
- M.M. Mirzaie, “Electrophoretic Deposition and Sintering of a Co-Mn Spinel Coating on Stainless Steel for Solid Oxide Fuel Cells Connectors: 2012-2013.
- A.A. Nojomi, “Development of a PEG-based Hydrogel for Articulate Cartilage”, 2012-2013.
- A. Manafirad, “A Nano-Drug Delivery System for Targeted Rapamycin Delivery for Bypass Graft Surgery”, 2011-2012.
- M. Mazaheri, “Fabrication and Cytotoxicity Assessment of a Graphene-Polysaccharide Nanocomposite for Tissue Engineering”, 2011-2012.
- N. Ebrahimi, “Molecular Dynamic Simulations of Shape Memory Effect in TiNi Nanowires”, 2011-2012.
- A. Salahi, “Study of the Corrosion Behavior of 316L/17-4PH Layered Composites with a Nanostructured Nickel Interlayer”, 2011-2012.
- A.H. Gorji, “Transient Liquid Joining of Nanostructured Zirconia to Stainless Steels Employing Ni and Ag Nanoparticles”, 2011-2012.
- N. Esfandiari, “Synthesis and Antibacterial Activity Evaluation of TiO₂/Ag nanorods”, 2010-2011.
- M. Mansourian, “Synthesis and Bioactivity of Chitosan/Nano-diamond Coatings” 2010-2011.
- Z. Bakhshi, “Development of a Drug-Eluting Nanocoating for Orthopedic Application”, 2010-2011.
- M. Daryani, “Effect of Ti on Dehydrogenation of Nanostructured Magnesium Hydride for Mobile Hydrogen Storage”, 2010-2011.
- H. Ghasemi, “Fatigue Properties of Nanostructured Al-SiC Nanocomposites”, 2010-2011.
- H. Amini, “Atomistic Simulation of Interface Formation in Ceramic/Metal Joints”, 2010-2011.
- M. Karimi, “Mechanical Properties of Nanostructured Al-20Si-5Fe alloy”, 2010-2011.
- Sh. Behzadi, “Synthesis and Biocompatibility Assessment of Pyrolytic Carbon” 2009-2010.
- H. Rabifar, “Molecular Simulation Study of Mechanical Behavior of Nanorods and Thin Layers”, 2009-2010.
- A. Molavi, “Shape Controlled Synthesis of Fe@Au Core/Shell Nanoparticles and surface Engineering for Targeted Drug Delivery”, 2009-2010.
- S. Solhjo, “Molecular Simulation Study of Melting, Solidification, and Remelting of FCC Metals”, 2009-2010.
- N. Mahmoudi, “Synthesis of a Nanocrystalline Ti-Cr-V-Fe alloy for Hydrogen Storage”, 2008-2009.
- N. Shervin: “Synthesis and Characterization of a CNT/Iron oxide Carry for Drug Delivery Application: The Role of Fe Concentration” 2007-2008.
- S. Ghaitani: “Synthesis and Characterization of a Novel CNT/Iron oxide Carriers for Drug Delivery Application: The Role of Fe Cations” 2007-2008.
- M. Vahidi: “Rapid Solidification Modeling of Hypereutectic Al-Si-Fe Alloys”, 2008-2009.
- N. Khakbash, “Chemical Vapor Synthesis of TiO₂ Doped Nanoparticles as Near UV-Visible Photocatalyst” 2007-2008.
- F. Jafari, “Synthesis and Characterization of Fe@Au Core/Shell Nanoparticles Coated with Biocompatible Polymer for Drug Delivery Application”, 2007-2008.
- H. Simchi, “Processing of Nanostructured MgH₂-Ni-Nb₂O₃ Composite for Hydrogen Storage Application”, 2007-2008.
- M. Naghib nezhad, “Dynamic Molecular Simulation of Nucleation and Growth of Fe-Co Magnetic Particles in Vapor Phase”, 2007-2008.

- A. Lak, "Synthesis of ZnO/TiO₂ Core/Shell Nanorods for Photocatalysis Application", 2007-008.
- M. Mazaheri, "Processing of Bulk Nanostructured 3Y-TZP Ceramic by Two-Step Sintering", 2006-2007.
- A. Afshar, "Microstructural Stability and Mechanical Properties of Cu-Al₂O₃ Nanocomposite", 2006-2007.
- M.H. Maneshian, "Synthesis of Nanocrystalline W-20%Cu Nanocomposite by High-Energy Mechanical Alloying and Sintering", 2005-2006.
- H. Arami, "Reactive Mechanical Milling of Al-CuO Powder for In-Situ Fabrication of Nanocrystalline AlCu-Al₂O₃ Nanocomposite", 2005-2006.
- M. Shahmohammadi, "Phase Formation during Sintering of Al-Zn-Mg-Cu Alloys", 2005-2006.
- V. Firouzidor, "Fabrication of M2/316L and M2/17-4PH Stepwise Graded Composite Layers", 2005-2006.
- P. Kohi, "Effect of Processing Parameters on the Characterization of TiO₂ Nanoparticles Synthesized by CVS Method", 2004-2005.
- H. Hafizpour, "Compressibility of Al-SiC Composite Powders: The Effect of Reinforcement Particle Size", 2004-2005.
- A. Hosseini Mnazzah, "Creep Behavior of Nanostructured Al-SiC Composite" 2004-2005.
- S. Esmailzadeh, "Foaming Behavior of Al-SiC-TiH₂ Composite Compacts", 2004-2005.
- H. Asgharzadeh, "Hot Deformation of Al6061 and Al6061-SiC Composites Produced by Hot Extrusion", 2003-2004.
- R. Yahossieni, "Simulation of Rapid Solidification of Metal Droplets during Gas Atomization Process", 2003-2004.
- M. Dourandish, "Metal Injection Molding of a High-Strength Low Alloy Steel", 2003-2004.
- R. Ahmadi, "Kinetics and Mechanisms of Nanoparticle Formation in Inert Gas Condensation Process", 2002-2003.
- S. Khalili, "Mechanical Properties of Al-SiC Composites with Architecture Structure", 2002-2003.
- A.H. Tavakoli, "Cyclic Compaction of Al-SiC Composite Powders: The Effect of Reinforcement Volume Fraction", 2002-2003.
- M.H. Fillabi, "Sinter-Joining of P/M Fe-Cu Alloy to Wrought Low Carbon Steel", 2002-2003.
- M. Khakbiz, "Rheological Behavior of PIM 316L-TiC Composite Feedstock", 2002-2003.
- M. Imandar, "Effect of VC and TaC on the Microstructure and Mechanical Strength of WC-10%Co Hardmetal", 2002-2003.

C) B.Sc.

- M. S. Rashidi Nezhad, M. M. Chiniforoushani Esfahani, A. Mirzaei Fashami, "Synthesis and comparison of a wide range of gold and silver nanoparticles with different morphologies for use in smart drug delivery systems for cancer treatment", 2022.
- M. Mohebbi, "a Fe₂O₃/Ni MOF nanocomposite as anode material for Li-ion batteries", 2022.
- P. Taghizadegan, "Enhancing stability and cycle ability of cathode active material by (dual-ion doping/coating)", 2022.
- S. Shibani, "Development of bioactive bioink nanocomposites", 2021.
- K. Mirinezhad, "drug delivery with hydrogel derives from the placenta and using MXene-Graphen as nanoparticle and Herceptin for breast cancer therapy", 2021.
- Y. Kargar, "drug delivery with hydrogel derives from the placenta and using MXene-Graphen as nanoparticle and Herceptin for breast cancer therapy", 2021.
- N. Rajabi, "Highly selective and efficient electrocatalyst for conversion of CO₂ to CO", 2021.
- E. Bahojb, "Synthesis of Prussian blue analogs as cathode materials for potassium-ion batteries", 2021.

- M. Amidian, "Modification of ZIF-67 with Au NPs for electrochemical sensing of Morphine", 2021.
- H. Alimohammadi, "Highly selective and efficient electrocatalyst for conversion of CO₂ to CO by Machine-learning", 2021.
- D. Hosseini, "Preparation of bioink-polymer scaffolds for polydopamine drug delivery", 2020.
- M. Kohkhezri, "Synthesis of Zr₃Al₃C₅ by mechanical ball milling and sintering", 2019.
- F. Khosronezhad, "Hemostatic dressing based on chitosan-PVA-kaolin nanofibers", 2019.
- S. Toufanian, "Light-activated drug release in chitosan-based wound dressings containing graphene oxide", 2018.
- F. Mazaheri, "Synthesis and investigation of mechanical properties and bioactivity of bone scaffolds based on gelatin/hydroxyapatite nanorods", 2018.
- N. Shafiei, "Synthesis and investigation of mechanical properties and bioactivity of bone scaffolds based on gelatin/hydroxyapatite nanorods", 2018.
- P. Jalilian, "Study of photocatalytic properties of g-C₃N₄", 2018.
- S. S. Mousavi Masouleh, "Fabrication and characterization of nanostructured hybrid graphene/Ni-Cu alloy glucose biosensors", 2016.
- A. Kakavand, "Graphitic carbon nitride nanostructure synthesis and evaluating its photocatalytic activities", 2016.
- M. Heydari, Fabrication, and study of mechanical properties of electrospun core-shell gelatin nanofibers", 2016.
- K. Darabi, "Fabrication and characterization of nanostructured hybrid graphene/Ni-Cu alloy glucose biosensors", 2016.
- A.A. Foroghinasab, "Electrospaying of gelatin nanoparticles as phenytoin sodium's carrier for wound healing", 2016.
- R. Ghaffari, "Encapsulation of curcumin in smart polymeric nanogels for triggerable drug delivery", 2016.
- M. Farivar, "Investigation of emission and photoluminescence properties of Au nanorods-graphene quantum dots hybrid systems", 2016.
- P. Bagheri, "Investigation of emission and photoluminescence properties of Au nanorods-graphene quantum dots hybrid systems", 2016.
- F. Moharramzadeh, "Electrophoretic deposition of chitosan-graphene oxide & glucose oxidase for blood glucose sensors", 2016.
- M.R. Rostami, "Synthesis of Hybrid PbS-Graphene Quantum Dots and Investigation of their Optoelectric and Biologic Properties", 2015.
- M.T. Hashemi, "Synthesis of Hybrid PbS-Graphene Quantum Dots and Investigation of their Optoelectric and Biologic Properties", 2015.
- Z. Razzaghi, "Investigation of CVD Conditions Effects on the Growth of Graphene Nanosheets", 2015.
- F. Rezaee Anaran, "Synthesis and investigation of properties of chitosan/bacteria cellulose/nanodiamonds nanocomposites via an electrospinning method", 2015.
- M. Tamizifar and B. Ghadyani, Preparation of graphene by CVD method for the synthesis of novel electronic devices, 2015
- M. Naieni and E. Hosseini, Synthesis of PbS Quantum Dots and Evaluation of Their Photoelectrical Properties", 2014.
- M. Bahrami, Fabrication of Functionally Graded YSZ/NiCrAlY Coating on Inconel 738 Superalloy by Spark Plasma Sintering", 2014.
- S. Hassanzadeh, "Fabrication of Schottky PbS Quantum Dot Solar Cells", 2013.
- A.A. Jazayeri, Synthesis of PbS Quantum Dots by Supercritical Fluid Method", 2013.

- S. Vafai nezhad, “Electrophoretic Deposition of Functionally Graded YSZ-NiO Composites for Solid Oxide Full Cell (SOFC) Anodes”, 2011.
- A. Yazdanfar, “Stability of YSZ-NiO Suspensions for Electrophoretic Deposition of Solid Oxide Full Cell (SOFC) Anodes” 2010.
- A. Faizollah, “Thermal Stability of Nanostructured Cu-Al₂O₃ Nanocomposites”, 2010.
- M. Fajamjo: “Flow Modeling of Particle Formation in the Chemical Vapor Synthesis (CVS) Reactor”, 2008.
- M. Mohajerani, “Effect of Morphology on the Photocatalytic behavior of ZnO Nanoparticles”, 2007.
- M. Haghightazadeh, “Creep of Powder Extruded Al-SiC Composites”, 2006.
- N. Khakbash, “Synthesis of TiO₂ Nanoparticles by Chemical Vapor Synthesis (CVS) Method”, 2006.
- H. Simchi, “Fatigue of Cu-Al₂O₃ Nanocomposite Produced by Internal Oxidation Method”, 2006.
- M. Ata’ie, “Fabrication of Bronze Foams by Chemical Precipitation Method”, 2005.
- M. Jamali, “Mechanical Properties of Cu-Al₂O₃ Nanocomposites”, 2004.
- S. Amini and B. Anasori, “Warm Compaction of Al-SiC Composite Powders”, 2004.
- M. Bamdad, “Mechanical Alloying of Al-Al₂O₃ Nanocomposite”, 2004.
- L. Farhang, “Fabrication of Al₃Si-SiC Composite Foams”, 2004.
- M. A’zami, “Heat Treatment of a Low Alloy Steel Produced by Direct Laser Sintering”, 2003.
- Y. Khoie and A.M. Tatari, “Electroplating of Ni-Co Coating on Polymers made by Rapid Prototyping”, 2003.
- H. Shahmirzaie, “Effect of Sn Addition on the Sintering Behavior and Ageing Response of P/M Al-Cu Alloys”, 2003.
- M. Khakbiz and M. Safari, “Sintering of M2 HSS-SiC Composite Compacts”, 2002.
- H. Asgharzadeh, “Microstructural Features of Laser Sintered M2 HSS Steel”, 2002.
- Mesbah S. and H. Khani, “Wear of Mill Liners”, 2002.
- M. Dourandish, “Effect of B Addition on the Sintering and Mechanical Properties of P/M Steels”, 2001.

SELECTED PUBLICATIONS**A) Patents****A1) International**

- 1) Abdolreza Simchi, Frank Petzoldt, Haiko Pohl, Holgar Löffler (2001): Verfahren zur Herstellung präziser Bauteile mittels Lasersintern. Deutsches Patent, No DE 100 39 144 C1 22.11.2001.
- 2) Abdolreza Simchi, Frank Petzoldt, Haiko Pohl, Holgar Löffler (2002): Verfahren zur Herstellung präziser Bauteile mittels Lasersintern und deren Nachbehandlung. Deutsches Patent, No DE 100 39 143 C1, 10.1.2002.
- 3) Mahmoudi Morteza, Mohammad Imani, Abdolreza Simchi (2011): Unsaturated polyester coated magnetic ultrafine particles for biological applications. USA Patent No. 20110223112, 15.09.2011.
- 4) Niloofar Eslahi and Abdolreza Simchi (2022): Hydrogel for cartilage tissue regeneration, US Patent No. 15935014, 26.07.2018.
- 5) Fatemeh Mohandes, Hengameh Bakhtiar, Mohammadhosein Nekoofar, Seyed Naser Ostad, Abdolreza Simchi (2021): Preparing hydroxyapatite nanostructures, USA Patent No. 11,001, 498B2.

A2) National

- 1) Asgharzadeh, H. and Simchi, A. (2009): A new procedure for precipitation hardening of nanostructured Al-Mg-Si alloys and their nanocomposites. Iran Patent, No 57752.
- 2) Fatemeh Mohandes, Mohammad Ali Mobarhan Bonab, Abdolreza Simchi (2016): Self-cleaning Superhydrophobic Nanostructured paints, resins, and coatings applied on different surfaces. Iran Patent, No 90208.
- 3) Mohandes, F., Bakhtiar, H., Nekoofar, M.H., Ostad, S.N., Simchi, A. (2017): Extraction and fabrication of nano-sized hydroxyapatite with controlled size and morphology from bio-wastes and natural resources at low temperature for bone tissue engineering and tooth filling materials. Iran Patent, No. 92062.
- 4) Nilofar Eslahi and Abdolreza Simchi (2017): Fabrication of smart nanocomposite hydrogel for cartilage tissue engineering, Iran Patent, No. 93254.
- 5) Mohammad Ghatan Kashani, Amirhossein Brenjchi, Abdolreza Simchi (2019): Films and textiles with antibacterial capacity and for health, sporting, and prevention applications, Iran Patent, No. 96389.
- 6) Fatemeh Mohandes, Elnaz Tamjid and Abdolreza Simchi (2021): Antiviral, hydrophobic, oleophobic and anti-fog textiles, Iran Patent, *Submitted patent*.

B1) Books

- 1) Simchi, A. and Tavakoli, A. H. (2006): Rapid Prototyping and Rapid Manufacturing Technologies. New Industries Center. Tehran. 228 pages.
- 2) Simchi, A. (2007): Nanoparticles: Processing and Applications. Sharif University Publications. Tehran. 280 pages.
- 3) Simchi, A., Khadrloo, K. and Vesali Naseh, M. (2013): Material Characterization: Nanostructures, Metals, and Polymers. Kian Publication. Tehran. 340 pages.
- 4) Simchi, A., Simchi, H. et al. (2015): Nanobioelectronics: Fundamentals and Applications. Sharif University Publications. Tehran. 540 pages.

B2) Contributions to books (Book chapters)

- 1) Eslahi, N., Lotfi, R., Zandi, N., Mazaheri, M., Soleimani, F., and Simchi, A. (2022): Graphene-based Polymer Nanocomposites in Biomedical Applications. In: Innovations in Graphene-Based Polymer Composites, Elsevier, 199-246.
- 2) Simchi, A. and Nojomi, A. (2012): Warm Compaction of Metal Powders. In: Advances in Powder Metallurgy, Vol. 1, Woodhead Publishing Limited, 86-108
- 3) Mahmoudi, M., Simchi, A., Imani, M., Milani, A.S. and Pieter Stroeve (2009): In Vitro Study of Bare and Poly (ethylene glycol)-co-Fumarate Coated Superparamagnetic Iron Oxide Nanoparticles for Reducing Potential Risks to Humans and the Environment Sustainable Energy. In: Handbook of Sustainable Energy, Nova Science Publishers, 649-666.

C) Selected peer-reviewed journal articles (Google Scholar: Total citations >15100; h-index = 65; Average citation per journal papers >50)

C1) Papers under review

- 1) Koohkhezri, M., Lotfi, R., Zandi, N., Emami, Z., Simchi, A. (2022): Drug-eluting electrospun core-shell nanofibers containing $Ti_3C_2T_x$ MXene for custom-made tissue engineering of patients with diabetes, blood fat, and blood pressure diseases, *Scientific Reports*, Under Review.
- 2) Mansoorianfar, M., Nabipour, H., Mozafari, M., Simchi, A., Pei, R. (2022): Target-responsive DNA aptamer-conjugated superparamagnetic Ag/CuS nanoparticles as near-infrared light-triggered theranostics and dual-modal imaging, *Applied Materials Today*, Under Review.
- 3) Mansoorianfar, M., Ullah, S., Cao, Y., Hussain, Z., Ullah, I., Simchi, A., Pei, R. (2022): Aptamers-conjugated Ti_3C_2 MXene for active tumor targeting, photothermal therapy, and dual-modal imaging, *Nano Today*, Under Review.

C2) Published articles

- 4) Rouein, Z., Jafari, H., Pishbin, F., Mohandes, F., Simchi A. (2022): In vitro bioactivity and biocompatibility of magnesium implants coated with poly (methyl methacrylate)-bioactive glass composite, *Materials Today Communications*, *In press*.
- 5) Ramedani, A., Sabzevari, O., Simchi A. (2022): Hybrid Ultrasound-Activated Nanoparticles Based on Graphene Quantum Dots for Cancer Treatment, *International Journal of Pharmaceutics* 629, 122373.
- 6) Mohandes, F., Dehghani, H., Angizi, Sh., Ramedani, A., Dolatyar, B., Ramezani Farani, M., Müllen, K., Simchi, A. (2022): Magneto-fluorescent contrast agents based on carbon Dots@ Ferrite nanoparticles for tumor imaging, *Journal of Magnetism and Magnetic Materials* 561, 169686.
- 7) Ramedani, A., Simchi, A., Sabzevari, O. (2022): Fluorescent Contrast agent Based on Graphene Quantum Dots Decorated Mesoporous Silica Nanoparticles for Detecting and Sorting Cancer Cells, *Jorjani Biomedicine Journal* 10 (3), 43-50.
- 8) Kafili, G., Tamjid, E., Niknejad, H., Simchi, A. (2022): Development of injectable hydrogels based on human amniotic membrane and polyethyleneglycol-modified nanosilicates for tissue engineering applications, *European Polymer Journal* 179, 111566.
- 9) Ramedani, A., Sabzevari, O., Simchi A. (2022): Processing of liposome-encapsulated natural herbs derived from *Silybum marianum* plants for the treatment of breast cancer cells, *Scientia Iranica*, *In press*.
- 10) Tohidi, H., Maleki-Jirsaraei, N., Simchi, A., Mohandes, F., Emami, Z., Fassina, L., Naro, F., Conti, B., Barbagallo, F. (2022): An electroconductive, thermosensitive, and injectable chitosan/pluronic/gold-decorated cellulose nanofiber hydrogel as an efficient carrier for regeneration of cardiac tissue, *Materials* 15 (15), 5122.
- 11) Hassanzadeh Azar, M., Mohammadi, M., Rezaei, N.T., Ayneband, S., Simchi, A., (2022): Effect of silica encapsulation on the stability and photoluminescence emission of FAPbI₃ nanocrystals for white-light-emitting perovskite diodes, *Journal of Alloys and Compounds* 907, 164465.
- 12) Saeidi, M., Amidian, M.A., Sheybanikashani, S., Mahdavi, H., Alimohammadi, H., Syedmoradi, L., Mohandes, F., Zarrabi, A., Tamjid, E., Omidfar, K., Simchi, A. (2022): Multilayered mesoporous composite nanostructures for highly sensitive label-free quantification of cardiac troponin-I, *Biosensors* 12 (5), 337.
- 13) Angizi, Sh., Ahmad Alem, S.A., Hasanzadeh Azar, M., Shayeganfar, F., Manning, M., Hatamie, A., Pakdel, A., Simchi, A. (2022): A Comprehensive Review on Planar Boron Nitride Nanomaterials: From 2D Nanosheets Towards 0D Quantum Dots, *Progress in Materials Science*, 124, 100884.
- 14) Ayneband, S., Mohammadi, M., Poushimin, R., Hasanzadeh Azar, M., Nunzi, J.-M., Simchi, A. (2022): Self-assembly, stability, and photoresponse of PbS quantum dot films capped with mixed halide perovskite ligands, 147, 111648.
- 15) Moharamzadeh, F., Zarghami, V., Mazaheri, M., Simchi, A., (2021): Concurrent electrophoretic deposition of enzyme-laden chitosan/graphene oxide composite films for biosensing, *Mat. Letters*, 308, 131228.

- 16) Saeidi, M., Lee, M., Ngome Okello, O.F., Choi, S.Y., Oh, S.S., Simchi, A. (2021): Ultrafast Graphitization and Reduction of Spongy Graphene Oxide by Low-Energy Electromagnetic Radiation to Boost the Performance and Stability of Carbon-Based Supercapacitors, *ACS Applied Energy Materials* 5 (1), 367-379.
- 17) Zhang, B., Bai, J., Zhang, Y., Zhou Ch., Wang, P., Zha, L., Li, J., Simchi, A., Zhou, B., High Yield of CO and Synchronous S Recovery from the Conversion of CO₂ and H₂S in Natural Gas Based on a Novel Electrochemical Reactor (2021): *Environ. Sci. Technol.* 55, 21, 14854–14862.
- 18) Hasanzadeh Azar M., Mohammadi M., Tabatabaei Rezaeia N., Ayneband S., Shoostari L., Mohammadpour R., and Simchi A., (2021): Stable Photodetectors Based on Formamidinium Lead Iodide Quantum Well Perovskite Nanoparticles Fabricated with Excess Organic Cations, *ASC Applied Nano Materials*, 4, 8, 7788–7799.
- 19) Khiarak, BN., Golmohammad, M., Shahraki, M.M., Simchi, A., (2021): Facile synthesis and self-assembling of transition metal phosphide nanosheets to microspheres as a high-performance electrocatalyst for full water splitting, *Journal of Alloys and Compounds* 875, 160049.
- 20) Khiarak, BN., Mohammadi, R., Mojaddami, M., Rahmati, R., Hemmati, A., Simchi, A., (2021) Efficient electrocatalytic oxidation of water and glucose on dendritic-shaped multicomponent transition metals/spongy graphene composites, *Electrochimica Acta* 386, 138484
- 21) Rouein Z.; Jafari H.; Pishbin F.; Mohammadi R.; Simchi A., (2021): Corrosion behavior of polymethyl methacrylate-bioactive glass 45S5 composite coated magnesium in simulated body fluid, *Progress in Organic Coatings*, Under review.
- 22) Khiarak, BN., Mohammadi, R., Mojaddami, M., Mohandes, F., Simchi, A., 3D self-supporting mixed transition metal oxysulfide nanowires on porous graphene networks for oxygen evolution reaction in alkaline solution, *Journal of Electroanalytical Chemistry* 893, 115308.
- 23) Hosseini SA., Daneshvar e Asl S., Vossoughi M., Simchi A., Sadrzadeh M., (2021): Green electrospun membranes based on chitosan/amino-functionalized nanoclay composite fibers for cationic dye removal: Synthesis and kinetic studies, *ACS Omega* 6 (16), 10816-10827.
- 24) Asgharzadeh, A., Asgharzadeh, H., Simchi, A., (2021): Role of Grain Size and Oxide Dispersion Nanoparticles on the Hot Deformation Behavior of AA6063: Experimental and Artificial Neural Network Modeling Investigations, *Metals and Materials International*, 27, 5212–5227.
- 25) Ayneband, S., Mohammadi, M., Poushimi, R., Nunzi, J.-M., Simchi, A. (2021): Efficient FAPbI₃-PbS quantum dot graphene-based phototransistors, *New Journal of Chemistry*, 45, 15285-15293.
- 26) Nourmohammadi Khiarak B., Hasanzadeh M., Simchi A., (2021): Electrocatalytic Hydrogen Evolution Reaction on Graphene Supported Transition Metal-Organic Frameworks, *Inorg. Chem. Comm.* 127, 108525.
- 27) Rahiminezhad–Soltani M., Saberyan K., Simchi A., (2021): New insight into reaction mechanisms of TiCl₄ for the synthesis of TiO₂ nanoparticles in H₂O-assisted atmospheric-pressure CVS process, *Materials Science and Engineering: B* 264, 114958.
- 28) Zandi N., Dolatyar B., Lotfi R., Shallageh Y., Shokrgozar M.A., Tamjid E., Annabi N., Simchi A., (2021): Biomimetic Nanoengineered Scaffold for Enhanced Full-Thickness Cutaneous Wound Healing, *Acta Biomaterialia*, 124, 191-204.
- 29) Rahmati R., Hemmati A., Mohammadi R., Hatami A., Tamjid E., Simchi A., (2020): Sensitive voltammetric detection of melatonin in pharmaceutical products by highly conductive porous graphene-gold composites, *ASC Sustainable Chemistry, and Engineering* 8 (49), 18224-18236.
- 30) Mojaddami M., Simchi A., (2020): Robust water splitting on staggered gap heterojunctions based on WO₃/WS₂-MoS₂ nanostructures, *Renewable Energy* 162, 504-512.
- 31) Aghajani Derazkola H, Simchi A., (2020): Processing and characterizations of polycarbonate/alumina nanocomposites by additive powder fed friction stir processing, *Thin-Walled Structures* 157, 107086.
- 32) Zandi N, Shirzaei Sani E, Mostafavi E, M Ibrahim D, Saleh B, Shokrgozar MA, Tamjid E, S Weiss P, Simchi A, Annabi N., (2020): Nanoengineered shear-thinning and bioprintable hydrogel as a versatile platform for biomedical applications, *Biomaterials* 267, 120476.
- 33) Aghajani Derazkola H, Khodabakhshi F, Simchi A., (2020): Evaluation of a polymer-steel laminated sheet composite structure produced by friction stir additive manufacturing (FSAM) technology, *Polymer Testing*, 90, 106690.

- 34) Angizi S, Khalaj M., Alem SSA., Pakdel A., Willander M., Simchi A., (2020), Towards the Two-Dimensional Hexagonal Boron Nitride (2D h-BN) Electrochemical Sensing Platforms, *J. Electrochemical Society*, 167 (12), 126513.
- 35) Hadavi B., Hassanzadeh M., Simchi A., (2020): Self-Powered Wearable Piezoelectric Sensors Based on Polymer Nanofiber-Metal-Organic Framework Nanoparticle Composites for Arterial Pulse Monitoring, *ACS Applied Nano Materials*, 3, 9, 8742–8752.
- 36) Boyuk MRTT, Ghanbari H., Simchi, A., Maghsouni, A. (2020): Seedless growth of two-dimensional disc-shaped WS₂ layers by chemical vapor deposition, *Materials Chemistry, and Physics*, 123837.
- 37) Hasanazadeh M., Simchi A., Shahriyari Far H., (2020): Nanoporous composites of activated carbon-metal organic frameworks for organic dye adsorption: Synthesis, adsorption mechanism, and kinetics studies, *Journal of Industrial and Engineering Chemistry*. 81, 405-414.
- 38) Ayneband S, Mohammadi M, Thorwarth K, Hany R, Nüesch FA, Rossell MD, Pauer R, Nunzi JM, Simchi A., (2002): Solution Processing and Self-Organization of PbS Quantum Dots Passivated with Formamidinium Lead Iodide (FAPbI₃), *ACS omega*, 5, 15746-15754.
- 39) Mohammadzadeh A, Mazaheri M, Sedighian A, Ghanbari H, Simchi A., (2020): Composites of reduced graphene oxide/nickel submicrorods for non-enzymatic electrochemical biosensing: Application to amperometric glucose detection, *Journal of The Electrochemical Society*, 167, 087513.
- 40) Mazaheri Karvandian F, Shafiei N, Mohandes F, Dolatyar B, Zandi N, Zeynali B, Simchi A., (2020): Glucose cross-linked hydrogels conjugate HA nanorods as bone scaffolds: Green synthesis, characterization and in vitro studies, *Materials Chemistry and Physics*, 242, 122515
- 41) Aghajani Derazkola H, Eyvazian A, Simchi A., (2020): Modeling and experimental validation of material flow during FSW of polycarbonate, *Materials Today Communications*. 22, 100796.
- 42) Zandi N, Lotfi R, Tamjid E, Shokrgozar MA, Simchi A., (2020): Core-sheath gelatin-based electrospun nanofibers for dual delivery release of biomolecules and therapeutics, *Materials Science and Engineering: C*, 108, 110432.
- 43) Aghajani Derazkola H, Eyvazian A, Simchi A., (2020): Submerged friction stir welding of dissimilar joints between an Al-Mg alloy and low carbon steel: Thermo-mechanical modeling, microstructural features, and mechanical properties, *Journal of Manufacturing Processes*, 50, 68-79.
- 44) Hatamie A, Angizi S, Kumar S, Pandey CM, Simchi A, Willander M, Malhotra BD., (2020): Textile-based chemical and physical sensors for healthcare monitoring, *Journal of The Electrochemical Society*, 167 (3), 037546.
- 45) Mojaddami M, Simchi A., (2020): First demonstration of photoelectrochemical water splitting by commercial W–Cu powder metallurgy parts converted to highly porous 3D WO₃/W skeletons, *International Journal of Hydrogen Energy*, 45(11), 6369-6379.
- 46) Eslahi N, Mahmoodi A, Mahmoudi N, Zandi N, Simchi A, (2020): Processing and properties of nanofibrous bacterial cellulose-containing polymer composites: A review of recent advances for biomedical applications, *Polymer Reviews*. 60 (1), 144-170.
- 47) Khiarak BN, Hasanazadeh M, Mojaddami M, shahriyari Far H, Simchi A., (2020): In situ synthesis of quasi-needle-like bimetallic organic frameworks on highly porous graphene scaffolds for efficient electrocatalytic water oxidation, *Chemical Communications*, 56, 3135-3138.
- 48) Razavizadeh O, Bahadormanesh B, Ghorbani M, Simchi A., (2020): Effect of Photoelectrochemical Activity of ZnO-Graphene Thin Film on the Corrosion of Carbon Steel and 304 Stainless Steel, *Journal of Materials Engineering and Performance*, 29(1), 497-505.
- 49) Gheysari H, Mohandes F, Mazaheri M, Dolatyar B, Askari M, Simchi A., (2020): Extraction of Hydroxyapatite Nanostructures from Marine Wastes for the Fabrication of Biopolymer-Based Porous Scaffolds, *Marine Drugs*, 18(1), 26.
- 50) Aghajani Derazkola H, Simchi A., (2020): A new procedure for the fabrication of dissimilar joints through injection of colloidal nanoparticles during friction stir processing: Proof concept for AA6062/PMMA joints, *Journal of Manufacturing Processes*, 49, 335-343.
- 51) Zandi N, Mostafavi E, Shokrgozar MA, Tamjid E, Webste TJr, Annabi N, Simchi A., (2020): Biomimetic proteoglycan nanoparticles for growth factor immobilization and delivery, *Biomaterials Science*, 8, 1127-1136.

- 52) Rostami B, Mirzaei SI, Zamani A, Simchi A, Fardmanesh M, (2019): Development of an enhanced porosity AgAgCl reference electrode with improved stability, *Engineering Research Express*, 1(1), 015039.
- 53) Angizi S., Shayeganfar F., Hasanzadeh Azar M., Simchi A., (2020): Surface/edge functionalized boron nitride quantum dots: Spectroscopic fingerprint of bandgap modification by chemical functionalization, *Ceramics International*. 46 (1), 978-985.
- 54) Kumar S, CM Pandey, Hatami A, Simchi A, Willander M, and Malhotra BD, (2019): Nanomaterial-Modified Conducting Paper: Fabrication, Properties, and Emerging Biomedical Applications, *Global Challenges*, 3 (12), 1900041.
- 55) Aghajani Derazkola H., Simchi A., Lambiase F., (2019): Friction stir welding of polycarbonate lap joints: Relationship between processing parameters and mechanical properties, *Polymer Testing* 79, 105999.
- 56) Azarniya A., Tamjid E., Eslahi N., Simchi A. (2019): Modification of bacterial cellulose/keratin nanofibrous mats by a tragacanth gum-conjugated hydrogel for wound healing, *International Journal of Biological Macromolecules*, 134, 280-289.
- 57) Shahsavari S, Hadian-Ghazvini S, Hooriabad Saboor F, Menbari Oskouie I, Hasany M, Simchi A, and L. Rogach A, (2019); Ligand functionalized copper nanoclusters for versatile applications in catalysis, sensing, bioimaging, and optoelectronics, *Mater. Chem. Front.* 3 (11), 2326-2356.
- 58) Rezvani E., Hatamie A., Berahman M., Simchi M., Angizi A., Rahmati, R., Kennedy J., Simchi A. (2019): Synthesis, First-Principle Simulation, and Application of Three-Dimensional Ceria Nanoparticles/Graphene Nanocomposite for Non-Enzymatic Hydrogen Peroxide Detection, *Journal of the Electrochemical Society*, 166 (5) H3167-H3174.
- 59) Rahiminezhad-Soltani, M., Kamal Saberyan, K., Simchi A. (2019): Gammer, C., New approaches in lowering the gas-phase synthesis temperature of TiO₂ nanoparticles by H₂O-assisted atmospheric pressure CVS process, *J. Mater. Res. Technol*, 8(3), 3024-3035.
- 60) Hasanzadeh M., Simchi A, Shahriyari-Far H. (2019): Kinetics and adsorptive study of organic dye removal using water-stable nanoscale metal-organic frameworks, *Materials Chemistry and Physics* 233, 267–275.
- 61) Haghshenas SSP., Nemati A., Simchi, A., Kim C.-U. (2019): Photocatalytic and photoluminescence properties of ZnO/graphene quasi core-shell nanoparticles *Ceramics International* 45, 8945–8961.
- 62) Haghshenas SSP., Nemati A., Simchi A., Kim C-U. (2019): Dispute in photocatalytic and photoluminescence behavior in ZnO/graphene oxide core-shell nanoparticles, *Materials Letters*, 240, 117-120.
- 63) Hatamie A., Rahmati R., Rezvani E., Angizi S., Simchi A. (2019): Yttrium Hexacyanoferrate Microflowers on Freestanding Three-Dimensional Graphene Substrates for Ascorbic Acid Detection, *ACS Applied Nano Materials*, 2, 2212-2221.
- 64) Mansouri M., Varahram N., Simchi A.: (2019), Effect of copper on the thermal stability and non-isothermal crystallization behavior of Al₁₈Ni_{10-x}Cu_xRE₄ (x = 0.5–2.5) amorphous alloys prepared by melt spinning, *Journal of Non-Crystalline Solids*, 506, 46-50.
- 65) Naserzadeh P., Ashrafi Hafez A., Abdorahim M., Abdollahifar M.A., Shabani R., Peirovi H., Simchi A., Ashtari K. (2018): Curcumin loading potentiates the neuroprotective efficacy of Fe₃O₄ magnetic nanoparticles in cerebellum cells of schizophrenic rats, *Biomedicine & Pharmacotherapy*, 108, 1244.
- 66) Rezvani, E., Hatamie, A., Berahman, M., Simchi, M., Angizi, S., Rahmati, R., Kennedy, J., Simchi, A. (2019): Synthesis, first-principle simulation, and application of three-dimensional ceria nanoparticles/graphene nanocomposite for non-enzymatic hydrogen peroxide detection, *Journal of The Electrochemical Society*, 166 (5) H1-H8.
- 67) Zahedi, E., Esmaeili, A., Eslahi, N., Shokrgozar, M., Simchi, A. (2019): Fabrication and characterization of core-shell electrospun fibrous mats containing medicinal herbs for wound healing and skin tissue engineering, *Marine drugs* 17 (1), 27.
- 68) Hatamie A., Rezvani E., Rasouli AS, Simchi A. (2019): Electrocatalytic Oxidation of Ethanol on Flexible Three-dimensional Interconnected Nickel/Gold Composite Foams in Alkaline Media, *Electroanalysis*, 31, 504-511.
- 69) Hatami, A., Jalilian, P., Rezvani, E., Kakavand, A., Simchi, A., (2019): Fast and ultra-sensitive voltammetric detection of lead ions by two-dimensional graphitic carbon nitride (g-C₃N₄) nanolayers as glassy carbon electrode modifier, *Measurement*, 134, 679-687.

- 70) Derazkola, HA, Simchi, A. (2019): An investigation on the dissimilar friction stir welding of T-joints between AA5754 aluminum alloy and poly (methyl methacrylate), *Thin-Walled Structures* 135, 376-384.
- 71) Angizi, Sh, Hatamie, A., Ghanbari, H., Simchi, A. (2018): Mechanochemical green synthesis of exfoliated edge-functionalized boron nitride quantum dots: Application to vitamin C sensing through hybridization with gold electrodes, *ACS applied materials & interfaces*, 10 (34), 28819-28827.
- 72) Bagheri, P., Farivar, M., Simchi, A., (2018): Graphene-mediated self-assembly of gold nanorods into long fibers with controllable optical properties, *Materials Letters* 224, 13-17.
- 73) Boyuk, M.R.R.T., Sovizi, S., Ghanbari, H., Simchi, A., Aboudzadeh, N., (2018): Developing seedless growth of atomically thin semiconductor layers: Application to transition metal dichalcogenides, *Ceramics International*, 44 (13), 15795-15803.
- 74) Ghaffari, R., Eslahi, N., Tamjid, E., Simchi, A., (2018): Dual-sensitive hydrogel nanoparticles based on conjugated thermoresponsive copolymers and protein filaments for triggerable drug delivery, *ACS applied materials & interfaces*, 10 (23), 19336–19346.
- 75) Aghajani Derazkola, H, Simchi, A. (2018): Experimental and thermomechanical analysis of friction stir welding of poly(methyl methacrylate) sheets. *Sci. Technol. Weld. Join.*, 23, 209-218.
- 76) Kiani, F., Ashari Astani, N., Rahighi, R., Tayyebi, A., Tayebi, M., Khezri, J., Hashemi, E., Rothlisberger, U., Simchi, A. (2018): Effect of graphene oxide nanosheets on visible light-assisted antibacterial activity of vertically-aligned copper oxide nanowire arrays. *Journal of Colloid and Interface Science* 521, 119–131.
- 77) Dolati, S., Azarniya, A., Azarniya, A., Eslami-shahed, H., Madaah Hosseini, H.R., Simchi, A., (2018): Toughening mechanism of SiC-bonded CNT bulk nanocomposites prepared by spark plasma sintering, *International Journal of Refractory Metals and Hard Materials* 71, 61-69.
- 78) Mazaheri, M., Simchi, A., Aashuri, H., (2018): Enzymatic biosensing by covalent conjugation of enzymes^[1] to 3D-networks of graphene nanosheets on arrays of vertically aligned gold nanorods: Application to voltammetric glucose sensing, *Microchimica Acta*, DOI: 10.1007/s00604-018-2722-9
- 79) Aghajani Derazkola, H, Simchi, A. (2018): Effects of alumina nanoparticles on the microstructure, strength and wear resistance of poly(methyl methacrylate)-based nanocomposites prepared by friction stir processing. *Journal of the Mechanical Behavior of Biomedical Materials*, 79, 246–253
- 80) Kiani, F., Razzaghi, Z., Ghadiani, B., Tamizifar, M., Mohmmadi, M.H., Simchi, A.: (2017): Self-limited growth of large-area monolayer graphene films by low pressure chemical vapor deposition for graphene-based field-effect transistors, *Ceramics International*, 43, 15010-15017
- 81) Shayeganfar, F., M. R. Rahimi-Tabar, A. Simchi, J. Beheshtian, (2017): Effects of functionalization and side defects on single-photon emission in boron nitride quantum dots, *Phys. Rev. B* 96, 165307.
- 82) Tavakoli, M.M, Simchi, A., Tavakoli, R., Fan, Z. (2017): Organic halides and nanocone plastic structures enhance the energy conversion efficiency and self-cleaning ability of colloidal quantum dot photovoltaic devices, *J. Phys. Chem. C*, 121, 9757–9765.
- 83) Ayoubi, M., Naserzadeh, P., Hashemi, M.H., Rostami, M.R., Tamjid, E., Tavakoli, M.M., Simchi, A. (2017) Biochemical mechanisms of dose-dependent cytotoxicity and ROS-mediated apoptosis induced by lead sulfided/graphene oxide quantum dots for potential bioimaging applications, *Scientific Reports*, 7, 12896.
- 84) Khodabakhshi, F., Simchi, A.: (2017). The role of microstructural features on the electrical resistivity and mechanical properties of powder metallurgy Al-SiC-Al₂O₃ nanocomposites, *Materials & Design*, 130, 26-36.
- 85) Aghajani Derazkola, H., Simchi, A. (2017): Experimental and thermomechanical analysis of friction stir welding of poly (methyl methacrylate) sheets, *Science and Technology of Welding and Joining*, 1-10.
- 86) Khodabakhshi, F., Simchi, A., Kokabi, AH., Gerlichd, AP., Noskoe M., Švec, P. (2017): Influence of hard inclusions on microstructural characteristics and textural components during dissimilar friction-stir welding of a PM Al–Al₂O₃–SiC hybrid nanocomposite with AA1050 alloy, *Sci. Technol. Weld. Joi.* 22, 412-427.
- 87) Khodabakhshi, F., Kokabi, A.H., Simchi, A., (2017) Reactive friction-stir processing of nanocomposites: effects of thermal history on microstructure–mechanical property relationships, *Materials Science and Technology*, 1-14.

- 88) Aghajani Derazkola, H., Khodabakhshi, F., Simchi, A. (2018) Friction-stir lap joining of aluminum-magnesium/poly-methyl-methacrylate hybrid structures: thermo-mechanical modeling and experimental feasibility study, *Science and Technology of Welding and Joining*, 23, 35-49.
- 89) Mazaheri, M., Aashuri, H., Simchi, A., (2017): Three-dimensional hybrid graphene/nickel electrodes on zinc oxide nanorod arrays as non-enzymatic glucose biosensors, *Sensors and Actuators B: Chemical* 251, 462-471.
- 90) Moeini, S., Mohammadi, M.R., Simchi, A. (2017): In-situ solvothermal processing of polycaprolactone/hydroxyapatite nanocomposites with enhanced mechanical and biological performance for bone tissue engineering, *Bioactive Materials*, 2, 146-155.
- 91) Nojoomi, A., Tamjid, E., Simchi, A., Bonakdar, S., Stroeve, P. (2017): Injectable polyethylene glycol-laponite composite hydrogels as articular cartilage scaffolds with superior mechanical and rheological properties, *International Journal of Polymeric Materials and Polymeric Biomaterials* 66, 105-114.
- 92) Mahmoudi, N., Eslahi, N., Mehdipour, A., Mohammadi, M., Akbari, M., Samadikuchaksaraei, A., Simchi, A. (2017): Temporary skin grafts based on hybrid graphene oxide-natural biopolymer nanofibers as effective wound healing substitutes: pre-clinical and pathological studies in animal models, *J. Mater. Sci.: Mater. Med.* 28, 73.
- 93) Khodabakhshi, F., Simchi, A., Kokabi, A.H. (2017): Surface modifications of an aluminum-magnesium alloy through reactive stir friction processing with titanium oxide nanoparticles for enhanced sliding wear resistance, *Surface and Coatings Technology*, 309, 114-123.
- 94) Tavakoli, M.M., Simchi, A., Mo, X.Z., Fan, (2017): High-quality organohalide lead perovskite films fabricated by layer-by-layer alternating vacuum deposition for high-efficiency photovoltaics, *Materials Chemistry Frontiers*, 1, 1520-1525.
- 95) Mahmoudi, N., Simchi, A. (2017): On the biological performance of graphene oxide-modified chitosan/ polyvinyl pyrrolidone nanocomposite membranes: In vitro and in vivo effects of graphene oxide, *Materials Science and Engineering C*, 70, 121–131.
- 96) Eslahi, N, Abdorahim, M, Simchi, A (2016): Smart Polymeric Hydrogels for Cartilage Tissue Engineering: A Review on the Chemistry and Biological Functions, *Biomacromolecules*, 17, 3441-3463.
- 97) Mehrabi, K., Khodabakhshi, F., Zareh, E., Shahbazkhan, A., Simchi, A. (2016): Effect of alumina nanoparticles on the microstructure and mechanical durability of melt-spun lead-free solders based on tin alloys, *Journal of Alloys and Compounds*, 688, 143-155.
- 98) Tavakoli, M.M., Tavakoli, R., Simchi, A., Fan, Z. (2016): The Role of Graphene Nanostructures on Colloidal Quantum Dot Photovoltaic Devices, *Meeting Abstracts*, 1094-1094.
- 99) Mobarhan Bonab, M. A., Simchi, A. (2016): Effect of silicon carbide nanoparticles on hot deformation of ultrafine-grained aluminum nanocomposites prepared by the hot powder extrusion process, *Powder Metallurgy*, 59, 262-270.
- 100) Eslahi, N., Simchi, A., Mehrjoo, M., Shokrgozar, M.A., Bonakdar, S. (2016): Hybrid cross-linked hydrogels based on fibrous protein/block copolymers and layered silicate nanoparticles: tunable thermosensitivity, biodegradability, and mechanical durability, *RSC Adv.* 6, 62944–62957.
- 101) Mehrabi, K., Khodabakhshi, F., Zareh, E., Shahbazkhan, A., Simchi, A. (2016): Effect of alumina nanoparticles on the microstructure and mechanical durability of melt-spun lead-free solders based on tin alloys, *Journal of Alloys and Compounds* 688, 143-155.
- 102) Mahdavi, M., Mahmoudi, N., Rezaie-Anaran, F., Simchi, A. (2016): Electrospinning of Nanodiamond-Modified Polysaccharide Nanofibers with Physico-Mechanical Properties Close to Natural Skins, *Marine Drugs* 14, 128.
- 103) Mirzaei, M., Simchi, A., Faghihi-Sani, M.A., Yazdanyar, A. (2016): Electrophoretic deposition and sintering of nanostructured manganese-cobalt spinel coating for solid oxide fuel cell interconnects, *Ceramics International* 42, 6648.
- 104) Sahandi Zangabad, P., Khodabakhshi, F., Simchi, A., Kokabi, A.H., (2016); Fatigue fracture of friction-stir processed Al–Al₃Ti–MgO hybrid nanocomposites, *International Journal of Fatigue*, 87, 266-278.
- 105) Shidpour, R., Vosoughi, M., Maghsoudi, H., Simchi, A. (2016): A general two-step chemical vapor deposition procedure to synthesize highly crystalline transition metal dichalcogenides: A case study of MoS₂, *Materials Research Bulletin*, 76, 473-478.

- 106) Maleki, H., Rai, A., Pinto, S., Evangelista, M., MS Cardoso, R., Paulo, C., Carneiro, T., Paiva, A., Imani, M., Simchi, A., Durães, L., Portugal, A., Ferreira, L. (2016): High Antimicrobial Activity and Low Human Cell Cytotoxicity of Core-Shell Magnetic Nanoparticles Functionalized with an Antimicrobial Peptide, *ACS applied materials & interfaces*, 8, 11366-11378.
- 107) Tavakoli, M.M., Mirfasih, M. H., Hasanzadeh, S., Aashuriam, H., Simchi, A. (2016): Surface passivation of lead sulfide nanocrystals with low electron affinity metals: photoluminescence and photovoltaic performance, *Physical Chemistry Chemical Physics (PCCP)* 18, 12086.
- 108) Azarniy, A., Eslahi, N., Mahmoudi, N., Simchi, A. (2016): Effect of graphene oxide nanosheets on the physicochemical properties of chitosan/bacterial cellulose nanofibrous composites, *Composites: Part A* 85, 113.
- 109) Ordikhani, F., Zustiak, S.P., Simchi, A. (2016): Surface Modifications of Titanium Implants by Multilayer Bioactive Coatings with Drug Delivery Potential: Antimicrobial, Biological, and Drug Release Studies, *The Journal of The Minerals, Metals & Materials Society*, 68, 1100.
- 110) Mahmoudi, N., Ostadhossein, F., Simchi, A. (2016): Physicochemical and antibacterial properties of chitosan-polyvinylpyrrolidone films containing self-organized graphene oxide nanolayers, *J. Appl. Poly. Sci.*, 133, 43194.
- 111) Paksereshta, A.H., Javadib, A.H., Bahramic, M., Khodabakhshid, F., Simchi, A. (2016): Spark plasma sintering of a multilayer thermal barrier coating on Inconel 738 superalloy: Microstructural development and hot corrosion behavior, *Ceramics International* 42, 2770–2779.
- 112) Ordikhani, F., Dehghani, M., Simchi, A. (2015): Antibiotic-loaded chitosan-Laponite films for local drug delivery by titanium implants: cell proliferation and drug release studies, *J. Mater. Sci. Mater. Med.* 26, 269.
- 113) Ordikhani, F., Ramezani Farani, M., Dehghani, M., Tamjid, T., Simchi, A. (2015): Physicochemical and biological properties of electrodeposited graphene oxide/chitosan films with drug-eluting capacity, *Carbon* 84, 91–102.
- 114) Tavakoli, M.M., Simchi, A., Aashuri, H. (2015): Supercritical synthesis and in situ deposition of PbS nanocrystals with oleic acid passivation for quantum dot solar cells, *Materials Chemistry and Physics* 156, 163–169.
- 115) Shidpour, R., Vosoughi, M., Simchi, A., Ghanbari, F. (2014): Effect of Morphology-based Defect Structure of ZnO Nanostructures in Photo-Degradation of Organic Dye, *MRS Proceedings* 1672.
- 116) Azarniya, A., Azarniya, A., Madaah Hosseini, H.R., Simchi, A. (2015): Nanostructured aluminum titanate (Al₂TiO₅) particles and nanofibers: Synthesis and mechanism of microstructural evolution, *Materials Characterization* 103, 125–132.
- 117) Tamjid, E., Simchi, A. (2015): Fabrication of a highly ordered hierarchically designed porous nanocomposite via indirect 3D printing: Mechanical properties and in vitro cell responses, *Materials & Design* 88, 924-931.
- 118) Asgharzadeh, H., Rahbar Niazi, M., Simchi, A. (2015): A Processing Map for Hot Deformation of an Ultrafine-Grained Aluminum-Magnesium-Silicon Alloy Prepared by Mechanical Milling and Hot Extrusion, *Metallurgical and Materials Transactions A* 46 (12), 5900-5908.
- 119) Khodabakhshi, F., Simchi, A., Kokabi, A.H., Gerlich, A.P. (2015): Friction stir processing of an aluminum-magnesium alloy with pre-placing elemental titanium powder: In-situ formation of an Al₃Ti-reinforced nanocomposite and materials characterization, *Materials Characterization* 108, 102-114.
- 120) Ostadhossein, F., Mahmoudi, N., Morales-Cid, G., Tamjid, E., Navas-Martos, F.J., Simchi, A. (2015): Development of Chitosan/Bacterial Cellulose Composite Films Containing Nanodiamonds as a Potential Flexible Platform for Wound Dressing, *Materials* 8 (9), 6401-6418.
- 121) Khodabakhshi, F., Simchi, A., Kokabi, A.H., Gerlich, A.P., Nosko, M. (2015): Effects of stored strain energy on restoration mechanisms and texture components in an aluminum-magnesium alloy prepared by friction stir processing, *Materials Science and Engineering: A* 642, 204-214.
- 122) Khodabakhshi, F., Simchi, A., Kokabi, A.H., Švec, P., Šimančík, F., Gerlich A.P. (2015): Effects of nanometric inclusions on the microstructural characteristics and strengthening of a friction-stir processed aluminum-magnesium alloy, *Materials Science and Engineering: A*, 642, 215-229.
- 123) Tavakoli, M.M., Aashuri, H., Simchi, A., Kalytchuk, S., Fan Z. (2015): Quasi Core/Shell Lead Sulfide/Graphene Quantum Dots for Bulk Heterojunction Solar Cells, *The Journal of Physical Chemistry C* 119 (33), 18886-18895.

- 124) M.M. Tavakoli, A. Simchi, H. Aashuri (2015): Supercritical synthesis and in situ deposition of PbS nanocrystals with oleic acid passivation for quantum dot solar cells, *Materials Chemistry and Physics*, 156, 163-169.
- 125) Farvizi, M., Ebadzadeh, T., Vaezi, MR., Yoon, Y., Kim, YJ., Kang, YJ., Kim, HS., Simchi, A. (2015): Effect of starting materials on the wear performance of NiTi-based composites, *Wear* 334, 35-43.
- 126) Ordikhani F., Ramezani Farani M., Dehghani M., Tamjid E., Simchi A., (2015): Physicochemical and biological properties of electrodeposited graphene oxide/chitosan films with drug-eluting capacity, *Carbon*, 84, 91–102.
- 127) Khodabakhshi F., Gerlich A.P., Simchi A., Kokabi A.H., (2015): Hot deformation behavior of an aluminum-matrix hybrid nanocomposite fabricated by friction stir processing, *Materials Science and Engineering: A*, 626, 458–466.
- 128) Khodabakhshi F., Gerlich A.P., Simchi A., Kokabi A.H. (2015): Cryogenic friction-stir processing of ultrafine-grained Al-Mg-TiO₂ nanocomposites, *Materials Science and Engineering: A*, 620, 471–482.
- 129) Tavakoli M.M., Tayyebi A., Simchi A., Aashuri H., Outokesh M., Fan Z. (2015): Physicochemical properties of hybrid graphene–lead sulfide quantum dots prepared by supercritical ethanol, *Journal of Nanoparticle Research*, 17, 9.
- 130) Tavakoli, M.M., Simchi, A., Fan, Z., Aashuri, H. (2015): Chemical processing of three-dimensional graphene networks on transparent conducting electrodes for depleted-heterojunction quantum dot solar cells, *Chemical Communications*, 52 (2), 323-326.
- 131) Mazaheri M., Eslahi, N., Ordikhani, F., Tamjid, E., Simchi, A. (2015): Nanomedicine applications in orthopedic medicine: state of the art, *International Journal of Nanomedicine* 10, 6039.
- 132) Tavakoli, MM., Aashuri, H., Simchi, A., Fan, Z., (2015): Hybrid zinc oxide/graphene electrodes for depleted heterojunction colloidal quantum-dot solar cells, *Physical Chemistry Chemical Physics* 17 (37), 24412-24419.
- 133) Farvizi, M., Ebadzadeh, T., Vaezi, MR., Yoon, EY., Kim, YJ., Kim, HS., Simchi, A., (2014): Microstructural characterization of HIP consolidated NiTi–nano Al₂O₃ composites, *Journal of Alloys and Compounds* 606, 21–26.
- 134) Shidpour, R., Vossoughi, M., Simchi, A. (2014): The Effect of oxygen defects on Activity of Au/ZnO Catalyst in Low-Temperature Oxidation of Benzyl Alcohol, *MRS Proceedings* 1675, 71-77.
- 135) Ordikhani, F., Simchi, A. (2014): Long-term antibiotic delivery by chitosan-based composite coatings with bone regenerative potential, *Applied Surface Science*, 317, 56–66.
- 136) Shidpour, R., Vossoughi, M., Simchi A., Micklich M. (2014): Extended Quantum Yield: A Dimensionless Factor Including Characteristics of Light Source, Photocatalyst Surface, and Reaction Kinetics in Photocatalytic Systems, *Ind. Eng. Chem. Res.*, 2014, 53 (30), 11973–11978.
- 137) Jamali, M., Khalili, S., Bagheri, R., Simchi, A. (2014): Study the Effect of Architectural Modification on Fracture Behavior of Al-DRA Composite, *Mechanics of Advanced Materials and Structures* 21, 662-668.
- 138) Shidpour R., Simchi A., Ghanbari F., Vossoughi M., (2014): Photo-degradation of organic dye by zinc oxide nanosystems with special defect structure: Effect of the morphology and annealing temperature, *Applied Catalysis A: General*, 472, 198–204.
- 139) Khodabakhshi F., Simchi A., Kokabi A.H., Gerlich A.P., Nosko, M. (2014): Effects of post-annealing on the microstructure and mechanical properties of friction stir processed Al-Mg-TiO nanocomposites, *Materials & Design*, 63, 30–41.
- 140) Daryani M., Simchi A., Sadati M., Mdaah Hosseini H, Targholizadeh H., Khakbiz M. (2014): Effects of Ti-based catalysts on hydrogen desorption kinetics of nanostructured magnesium hydride, *International Journal of Hydrogen Energy*, 39, 21007–21014.
- 141) Khodabakhshi F., Simchi A., Kokabi A.H., Sadeghahmadi M., Gerlich A.P. (2015): Reactive friction stir processing of AA 5052–TiO₂ nanocomposite: process–microstructure–mechanical characteristics, *Materials Science and Technology*, 31(4), 426-435.
- 142) Gorji A.H., Simchi A., Kokabi A.H. (2014): Development of composite silver/nickel nanopastes for low temperature joining of yttria-stabilized zirconia to stainless steels, *Ceramics International* 41, (1), 1815–1822.

- 143) Ordikhani, F., Tamjid, E. and Simchi, A. (2014): Characterization and antibacterial performance of electrodeposited chitosan-vancomycin composite coatings for prevention of implant-associated infections. *Materials Science and Engineering C*, 41, 240-248.
- 144) Esfandiari, N., Simchi, A., and Bagheri, R. (2014): Size tuning of Ag-decorated TiO₂ nanotube arrays for improved bactericidal capacity of orthopedic implants. *Journal of Biomedical Materials Research Part A*, 102 (8), 2625-35.
- 145) Khodabakhshi, F., Simchi, A., Kokabi, A.H., Nosko and M., Švec, P. (2014) Strain rate sensitivity, work hardening, and fracture behavior of an Al-Mg TiO₂ nanocomposite prepared by friction stir processing. *Metallurgical and Materials Transactions A*. 45 (9), 4073-4088.
- 146) Mansouri, M., Simchi, A., Lee, J., Park, E., and Varahram, N. (2014): Non-isothermal kinetic studies of crystallization in amorphous Al₈₆Ni₁₀MM₄ alloy. *Journal of Non-Crystalline Solids* 387, 36-40.
- 147) Mansouri, M., Simchi, A., Varahram, N. and Park, E. (2014): Development of fcc-Al nanoparticles during crystallization of amorphous Al-Ni alloys containing mischmetal: Microstructure and hardness evaluation. *Materials Science and Engineering A*, 604, 92-97.
- 148) Mazaheri, M., Akhavan, O. and Simchi, A. (2014): Flexible bactericidal graphene oxide-chitosan layers for stem cell proliferation. *Applied Surface Science* 301, 456-462.
- 149) Khodabakhshi, F., Simchi, A., Kokabi, A., Nosko, M., Švec, P. and Švec, P. (2014): Microstructure and texture development during friction stir processing of Al-Mg alloy sheets with TiO₂ nanoparticles. *Materials Science and Engineering A*, 605, 108-118.
- 150) Akbarpour, M., Salahi, E., Alikhani Hesari, F., Simchi, A., and Kim, H. (2014): Microstructure and compressibility of SiC nanoparticles reinforced Cu nanocomposite powders processed by high energy mechanical milling. *Ceramics International* 40, 951-960.
- 151) Jamali, M., Khalili, S., Bagheri, R., and Simchi, A. (2014): Study the Effect of Architectural Modification on Fracture Behavior of Al-DRA Composite. *Mechanics of Advanced Materials and Structures* 8, 662-668.
- 152) Akbarpour, M., Salahi, E., Hesari, F. A., Yoon, E., Kim, H., and Simchi, A. (2013): Microstructural development and mechanical properties of nanostructured copper reinforced with SiC nanoparticles. *Materials Science and Engineering A*, 568, 33-39.
- 153) Asgharzadeh, H., Kim, H. and Simchi, A. (2013): Microstructure, strengthening mechanisms and hot deformation behavior of an oxide-dispersion strengthened UFG Al6063 alloy. *Materials Characterization* 75, 108-114.
- 154) Akbarpour, M., Salahi, E., Alikhani Hesari, F., Kim, H., and Simchi, A. (2013): Effect of nanoparticle content on the microstructural and mechanical properties of nano-SiC dispersed bulk ultrafine-grained Cu matrix composites. *Materials and Design* 52, 881-887.
- 155) Akbarpour, M., Salahi, E., Alikhani Hesari, F., Simchi, A. and Kim, H. (2013): Fabrication, characterization and mechanical properties of hybrid composites of copper using the nanoparticles of SiC and carbon nanotubes. *Materials Science and Engineering A*, 572, 83-90.
- 156) Farvizi, M., Ebadzadeh, T., Vaezi, M., Kim, H. and Simchi, A. (2013): Effect of nano Al₂O₃ addition on mechanical properties and wear behavior of NiTi intermetallic. *Materials and Design* 51, 375-382.
- 157) Farvizi, M., Ebadzadeh, T., Vaezi, M., Simchi, A., and Kim, H. (2013): Mechanical-activated phase transformation of NiTi in the presence of nanoparticles. *Nano* 8.1350048-1350058.
- 158) Khodabakhshi, F., Ghasemi Yazdabadi, H., Kokabi, A., and Simchi, A. (2013): Friction stir welding of a P/M Al-Al₂O₃ nanocomposite: Microstructure and mechanical properties. *Materials Science and Engineering A*, 585, 222-232.
- 159) Lan, X., Bai, J., Masala, S., Thon, S. M., Ren, Y., Kramer, I. J., Hoogland, S., Simchi, A., Koleilat, G. I., PazSoldan, D. and Sargent, E.H. (2013b): Self-Assembled, nanowire network electrodes for depleted bulk heterojunction solar cells (*Adv. Mater.* 12/2013). *Advanced Materials* 25, 1768-1768.
- 160) Mansoorianfar, M., Shokrgozar, M. A., Mehrjoo, M., Tamjid, E. and Simchi, A. (2013): Nanodiamonds for surface engineering of orthopedic implants: Enhanced biocompatibility in human osteosarcoma cell culture. *Diamond and Related Materials* 40, 107-114.
- 161) Stadler, P., Sutherland, B. R., Ren, Y., Ning, Z., Simchi, A., Thon, S. M., Hoogland, S. and Sargent, E. H. (2013): Joint Mapping of Mobility and Trap Density in Colloidal Quantum Dot Solids. *ACS nano*, 7, 5757-5762.

- 162) Tamjid, E., Simchi, A., Dunlop, J. W., Fratzl, P., Bagheri, R., and Vossoughi, M. (2013): Tissue growth into three-dimensional composite scaffolds with controlled micro-features and nanotopographical surfaces. *Journal of Biomedical Materials Research Part A* 101, 2796-2807.
- 163) Yazdabadi, H. G., Ekrami, A., Kim, H., and Simchi, A. (2013): An Investigation on the Fatigue Fracture of P/M Al-SiC Nanocomposites. *Metallurgical and Materials Transactions A* 44, 2662-2671.
- 164) Zarabian, M., Yar, A. Y., Vafaenezhad, S., Sani, M. and Simchi, A. (2013): Electrophoretic deposition of functionally-graded NiO-YSZ composite films. *Journal of the European Ceramic Society* 33, 1815-1823.
- 165) Soleimanpour, A., Abachi, P. and Simchi, A. (2012): Microstructure and mechanical properties of WC-10Co cemented carbide containing VC or (Ta, Nb) C and fracture toughness evaluation using different models. *International Journal of Refractory Metals and Hard Materials* 31, 141-146.
- 166) Solhjoo, S., Simchi, A. and Aashuri, H. (2012): Molecular dynamics simulation of melting, solidification and remelting processes of aluminum. *IJST, Transactions of Mechanical Engineering* 36, 13-23.
- 167) Lak, A., Simchi, A., and Nemati, Z. A. (2012): Photocatalytic activity of TiO₂-capped ZnO nanoparticles. *Journal of Materials Science: Materials in Electronics* 23, 361-369.
- 168) Asgharzadeh, H., Simchi, A. and Kim, H. (2012a): Dynamic restoration and microstructural evolution during hot deformation of a P/M Al6063 alloy. *Materials Science and Engineering: A* 542, 56-63.
- 169) Asgharzadeh, H., Simchi, A. and Kim, H. (2012b): High-temperature deformation and structural restoration of a nanostructured Al alloy. *Scripta Materialia* 66, 911-914.
- 170) Behzadi, S., Imani, M., Yousefi, M., Galinetto, P., Simchi, A., Amiri, H., Stroeve, P., and Mahmoudi, M. (2012): Pyrolytic carbon coating for cytocompatibility of titanium oxide nanoparticles: a promising candidate for medical applications. *Nanotechnology* 23, 045102.
- 171) Khakpash, N., Simchi, A., and Jafari, T. (2012): Adsorption and solar light activity of transition-metal doped TiO₂ nanoparticles as semiconductor photocatalyst. *Journal of Materials Science: Materials in Electronics* 23, 659-667.
- 172) Maleki, H., Simchi, A., Imani, M., and Costa, B. (2012): Size-controlled synthesis of superparamagnetic iron oxide nanoparticles and their surface coating by gold for biomedical applications. *Journal of Magnetism and Magnetic Materials* 324, 3997-4005.
- 173) Amini, H., Simchi, A., and Kokabi, A. (2012): Effects of crystal orientation on the tensile and shear deformation of nickel-silicon interfaces: A molecular dynamics simulation. *Materials Science and Engineering A* 543, 217-223.
- 174) Shervin, S., Gheyfani, S. and Simchi, A. (2011): Formation of carbon nanotubes in the iron-catalyzed liquid arcing method. *International Journal of Modern Physics B* 25, 4411-4417.
- 175) Asgharzadeh, H., Simchi, A. and Kim, H. (2011a): Hot deformation of ultrafine-grained Al6063/Al₂O₃ nanocomposites. *Journal of Materials Science* 46, 4994-5001.
- 176) Asgharzadeh, H., Simchi, A. and Kim, H. (2011b): Microstructural features, texture and strengthening mechanisms of nanostructured AA6063 alloy processed by powder metallurgy. *Materials Science and Engineering* 528, 3981-3989.
- 177) Asgharzadeh, H., Simchi, A. and Kim, H. (2011c): Microstructure and mechanical properties of oxide-dispersion strengthened Al6063 Alloy with ultra-fine grain structure. *Metallurgical and Materials Transactions A* 42, 816-824.
- 178) Asgharzadeh, H., Simchi, A. and Kim, H. (2011d): A plastic-yield compaction model for nanostructured Al6063 alloy and Al6063/Al₂O₃ nanocomposite powder. *Powder Technology* 211, 215-220.
- 179) Delavari H, H., Madaah Hosseini, H. and Simchi, A. (2011): Effects of particle size, shape, and crystal structure on the formation energy of Schottky vacancies in free-standing metal nanoparticles: A model study. *Physica B: Condensed Matter* 406, 3777-3780.
- 180) Delavari H, H., Madaah Hosseini, H. and Simchi, A. (2011): A simple model for the size and shape-dependent Curie temperature of freestanding Ni and Fe nanoparticles based on the average coordination number and atomic cohesive energy. *Chemical Physics* 383, 1-5.
- 181) Dourandish, M., Simchi, A., Hokamoto, K. and Tanaka, S. (2011): Phase formation during sintering of nanocrystalline zirconia/stainless steel functionally graded composite layers. *Materials Letters* 65, 523-526.

- 182) Gheyhani, S., Shervin, S. and Simchi, A. (2011): On the Formation of SWCNTs and MWCNTs by Arc-Discharge in Aqueous Solutions: The Role of Iron Charge and Counter Ions. *Fullerenes, Nanotubes, and Carbon Nanostructures* 19, 317-328.
- 183) Hosseini, H. M., and Simchi, A. (2011): A simple model for the size and shape-dependent Curie temperature of freestanding Ni and Fe nanoparticles based on the average coordination number and atomic cohesive energy. *Chemical Physics* 383, 1-5.
- 184) Mahmoudi, N., Kafrou, A. and Simchi, A. (2011): Hydrogen desorption properties of MgH₂-TiCr_{1.2}Fe_{0.6} nanocomposite prepared by high-energy mechanical alloying. *Journal of Power Sources* 196, 4604-4608.
- 185) Mahmoudi, N., Kafrou, A. and Simchi, A. (2011): Synthesis of a nanostructured MgH₂-Ti alloy composite for hydrogen storage via combined vacuum arc remelting and mechanical alloying. *Materials Letters* 65, 1120-1122.
- 186) Mortazavi, B., Simchi, A., Besharati-Givi, M. and Rajabpour, A. (2011): Molecular dynamics investigation of β -SiC behavior under three-axial tensile loading. *Journal of Computational and Theoretical Nanoscience* 8, 2187-2192.
- 187) Pishbin, F., Simchi, A., Ryan, M. and Boccaccini, A. (2011): Electrophoretic deposition of chitosan/45S5 Bioglass® composite coatings for orthopedic applications. *Surface and Coatings Technology* 205, 5260-5268.
- 188) Simchi, A. (2011): Sintering viscosity and sintering stress of nanostructured WC-Co parts prepared by powder injection molding. *Powder Metallurgy* 54, 84-88.
- 189) Simchi, A., and Godlinski, D. (2011): Densification and microstructural evolution during laser sintering of A356/SiC composite powders. *Journal of materials science* 46, 1446-1454.
- 190) Simchi, A., Petzoldt, F., Hartwig, T. and Veltl, G. (2011): Uneven shrinkage causes problems for cheaper hardmetal tooling. *Metal Powder Report* 66, 29-32.
- 191) Simchi, A., Tamjid, E., Pishbin, F. and Boccaccini, A. (2011): Recent progress in inorganic and composite coatings with bactericidal capability for orthopedic applications. *Nanomedicine: Nanotechnology, Biology and Medicine* 7, 22-39.
- 192) Simchi, H., Kafrou, A. and Simchi, A. (2011): Structural characteristics and desorption properties of nanostructured MgH₂ synthesized by high energy mechanical milling. *Powder Metallurgy* 54, 480-483.
- 193) Tamjid, E., Bagheri, R., Vossoughi, M. and Simchi, A. (2011a): Effect of particle size on the in vitro bioactivity, hydrophilicity and mechanical properties of bioactive glass-reinforced polycaprolactone composites. *Materials Science and Engineering C* 31, 1526-1533.
- 194) Tamjid, E., Bagheri, R., Vossoughi, M., and Simchi, A. (2011b): Effect of TiO₂ morphology on in vitro bioactivity of polycaprolactone/TiO₂ nanocomposites. *Materials Letters* 65, 2530-2533.
- 195) Asgharzadeh, H., Simchi, A. and Kim, H.S. (2010): In situ synthesis of nanocrystalline Al₆₀₆₃ matrix nanocomposite powder via reactive mechanical alloying. *Materials Science and Engineering A* 527, 4897-4905.
- 196) Asgharzadeh, H., Simchi, A. and Kim, H.S. (2010): Hot Workability of Ultrafine-Grained Aluminum Alloy Produced by Severe Plastic Deformation of Al₆₀₆₃ Powder and Consolidation. *Materials Science Forum* 667, 979-984.
- 197) Dourandish, M., Simchi, A., Hokamoto, K. and Tanaka, S. (2010): Interface formation and bond strength in 3Y-TZP/Cr composite bilayers produced by sinter-joining. *Materials Science and Engineering A* 527, 449-453.
- 198) Firouzidor, V. and Simchi, A. (2010): Co-sintering of M2/17-4PH Powders for Fabrication of Functional Graded Composite Layers. *Journal of Composite Materials* 44, 417-435.
- 199) Hafizpour, H., Simchi, A. and Parvizi, S. (2010): Analysis of the compaction behavior of Al-SiC nanocomposites using linear and non-linear compaction equations. *Advanced Powder Technology* 21, 273-278.
- 200) Hesabi, Z. R., Sanjari, M., Simchi, A., Reihani, S. and Simancik, F. (2010): Effect of alumina nanoparticles on hot strength and deformation behavior of Al-5vol% Al₂O₃ nanocomposite: experimental study and modeling. *Journal of nanoscience and nanotechnology* 10, 2641-2645.
- 201) Hesabi, Z. R., Simchi, A., Reihani, S.S. and Simancik, F. (2010): Fabrication and characterization of ultrafine-grained Al-5vol% Al₂O₃ nanocomposite. *International Journal of Nanomanufacturing* 5, 341-351.

- 202) Jafari, T., Simchi, A. and Khakpash, N. (2010): Synthesis and cytotoxicity assessment of superparamagnetic iron–gold core-shell nanoparticles coated with polyglycerol. *Journal of colloid and interface science* 345, 64-71.
- 203) Mahmoudi, M., Hosseinkhani, H., Hosseinkhani, M., Boutry, S., Simchi, A., Journeay, W.S., Subramani, K. and Laurent, S. (2010): Magnetic resonance imaging tracking of stem cells in vivo using iron oxide nanoparticles as a tool for the advancement of clinical regenerative medicine. *Chemical Reviews* 111, 253-280.
- 204) Mahmoudi, M., Simchi, A. and Imani, M. (2010): Recent advances in surface engineering of superparamagnetic iron oxide nanoparticles for biomedical applications. *Journal of the Iranian Chemical Society* 7, S1-S27.
- 205) Mahmoudi, M., Simchi, A., Imani, M., Shokrgozar, M.A., Milani, A.S., Häfeli, U.O., and Stroeve, P. (2010): A new approach for the in vitro identification of the cytotoxicity of superparamagnetic iron oxide nanoparticles. *Colloids and Surfaces B: Biointerfaces* 75, 300-309.
- 206) Mahmoudi, M., Simchi, A., Imani, M., Stroeve, P. and Sohrabi, A. (2010): Templated growth of superparamagnetic iron oxide nanoparticles by temperature programming in the presence of poly (vinyl alcohol). *Thin Solid Films* 518, 4281-4289.
- 207) Mohammadi, M. S., Simchi, A. and Gierl, C. (2010): Phase formation and microstructural evolution during sintering of Al–Zn–Mg–Cu alloys. *Powder Metallurgy* 53, 62-70.
- 208) Monazzah, A. H., Simchi, A., and Reihani, S. (2010): Creep behavior of hot extruded Al–Al₂O₃ nanocomposite powder. *Materials Science and Engineering A* 527, 2567-2571.
- 209) Pishbin, F., Simchi, A., Ryan, M. and Boccaccini, A. (2010a): M-19 Electrophoretic Deposition of Chitosan and Chitosan-BioGlass® Bioactive Coatings for Orthopaedic Applications. *Journal of Biomechanics* 43, S59.
- 210) Pishbin, F., Simchi, A., Ryan, M., and Boccaccini, A. (2010b): A study of the electrophoretic deposition of Bioglass® suspensions using the Taguchi experimental design approach. *Journal of the European Ceramic Society* 30, 2963-2970.
- 211) Razavi Hesabi, Z., Sanjari, M., Simchi, A., Seyed Reihani, S., and Simancik, F. (2010): Effect of alumina nanoparticles on hot Strength and deformation behavior of Al-5vol% Al₂O₃ nanocomposite: Experimental study and modeling. *Journal of Nanoscience and Nanotechnology* 10, 2641-2645.
- 212) Shervin, S., Gheyhani, S., and Simchi, A. (2010): Effect of Fe³⁺ concentration on MWCNTs formation in the liquid arcing method. *Physica B: Condensed Matter* 405, 4344-4349.
- 213) Simchi, A. and Petzoldt, F. (2010): Cosintering of powder injection molding parts made from ultrafine WC-Co and 316L stainless steel powders for fabrication of novel composite structures. *Metallurgical and Materials Transactions A* 41, 233-241.
- 214) Afshar, A. and Simchi, A. (2009): Flow stress dependence on the grain size in alumina dispersion-strengthened copper with a bimodal grain size distribution. *Materials Science and Engineering A* 518, 41-46.
- 215) Asgharzadeh, H. and Simchi, A. (2009): Supersolidus liquid phase sintering of Al6061/SiC metal matrix composites. *Powder Metallurgy* 52, 28-35.
- 216) Dourandish, M. and Simchi, A. (2009): Study the sintering behavior of nanocrystalline 3Y-TZP/430L stainless-steel composite layers for co-powder injection molding. *Journal of Materials Science* 44, 1264-1274.
- 217) Hafizpour, H., Sanjari, M., and Simchi, A. (2009): Analysis of the effect of reinforcement particles on the compressibility of Al–SiC composite powders using a neural network model. *Materials and Design* 30, 1518-1523.
- 218) Hesabi, Z., Kamrani, S., Simchi, A. and Reihani, S. (2009): Effect of nanoscaled reinforcement particles on the structural evolution of aluminum powder during mechanical milling. *Powder Metallurgy* 52, 151-157.
- 219) Khakpash, N., Simchi, A., and Kohi, P. (2009): Gas-phase synthesis of SnO_x nanoparticles and characterization. *Journal of Alloys and Compounds* 470, 289-293.
- 220) Mahmoudi, M., Shokrgozar, M. A., Simchi, A., Imani, M., Milani, A.S., Stroeve, P., Vali, H., Häfeli, U.O. and Bonakdar, S. (2009): Multiphysics flow modeling and in vitro toxicity of iron oxide nanoparticles coated with poly (vinyl alcohol). *Journal of Physical Chemistry C* 113, 2322-2331.

- 221) Mahmoudi, M., Simchi, A. and Imani, M. (2009): Cytotoxicity of uncoated and polyvinyl alcohol coated superparamagnetic iron oxide nanoparticles. *Journal of Physical Chemistry C* 113, 9573-9580.
- 222) Mahmoudi, M., Simchi, A., Imani, M. and Häfeli, U. O. (2009): Superparamagnetic iron oxide nanoparticles with rigid cross-linked polyethylene glycol fumarate coating for application in imaging and drug delivery. *Journal of Physical Chemistry C* 113, 8124-8131.
- 223) Mahmoudi, M., Simchi, A., Imani, M., Milani, A. S. and Stroeve, P. (2009): An in vitro study of bare and poly (ethylene glycol)-co-fumarate-coated superparamagnetic iron oxide nanoparticles: a new toxicity identification procedure. *Nanotechnology* 20, 225104(8pp).
- 224) Mahmoudi, M., Simchi, A., Milani, A. and Stroeve, P. (2009): Cell toxicity of superparamagnetic iron oxide nanoparticles. *Journal of colloid and interface science* 336, 510-518.
- 225) Mahmoudi, M., Simchi, A., Vali, H., Imani, M., Shokrgozar, M. A., Azadmanesh, K., and Azari, F. (2009): Cytotoxicity and cell cycle effects of bare and poly(vinyl alcohol)-coated iron oxide nanoparticles in mouse fibroblasts. *Advanced Engineering Materials* 11, B243-B250.
- 226) Mazaheri, M., Simchi, A., Dourandish, M. and Golestani-Fard, F. (2009): Master sintering curves of nanoscale 3Y-TZP powder compacts. *Ceramics International* 35, 547-554.
- 227) Mohajerani, M. S., Lak, A. and Simchi, A. (2009): Effect of morphology on the solar photocatalytic behavior of ZnO nanostructures. *Journal of Alloys and Compounds* 485, 616-620.
- 228) Rajabi, M., Vahidi, M., Simchi, A. and Davami, P. (2009a): Effect of rapid solidification on the microstructure and mechanical properties of hot-pressed Al-20Si-5Fe alloys. *Materials Characterization* 60, 1370-1381.
- 229) Rajabi, M., Vahidi, M., Simchi, A. and Davami, P. (2009b): Microstructural evolution of Al-20Si-5Fe alloy during rapid solidification and hot consolidation. *Rare Metals* 28, 639-645.
- 230) Simchi, A., Pishbin, F. and Boccaccini, A. (2009): Electrophoretic deposition of chitosan. *Materials Letters* 63, 2253-2256.
- 231) Simchi, H., Kafrou, A. and Simchi, A. (2009a): Metal hydrides show potential under stress. *Metal Powder Report* 64, 24-28.
- 232) Simchi, H., Kafrou, A. and Simchi, A. (2009b): Synergetic effect of Ni and Nb₂O₅ on dehydrogenation properties of nanostructured MgH₂ synthesized by high-energy mechanical alloying. *Int. J. Hydrogen Energy*, 34, 7724-7730.
- 233) Simchi, H. and Simchi, A. (2009): Tensile and fatigue fracture of nanometric alumina reinforced copper with bimodal grain size distribution. *Materials Science and Engineering A* 507, 200-206.
- 234) Arami, H., Simchi, A. and Reihani, S. (2008): Mechanical induced reaction in Al-CuO system for in-situ fabrication of Al-based nanocomposites. *Journal of Alloys and Compounds* 465, 151-156.
- 235) Asgharzadeh, H. and Simchi, A. (2008): Hot deformation of PM Al6061 alloy produced by sintering and powder extrusion. *Powder Metallurgy* 51, 354-360.
- 236) Dourandish, M., Godlinski, D., Simchi, A. and Firouzdar, V. (2008): Sintering of biocompatible P/M Co-Cr-Mo alloy (F-75) for fabrication of porosity-graded composite structures. *Materials Science and Engineering A* 472, 338-346.
- 237) Afshar, A. and Simchi, A. (2008): Abnormal grain growth in alumina dispersion-strengthened copper produced by an internal oxidation process. *Scripta Materialia* 58, 966-969.
- 238) Dourandish, M., Simchi, A., Tamjid Shabestary, E. and Hartwig, T. (2008): Pressureless sintering of 3Y-TZP/stainless steel composite layers. *Journal of the American Ceramic Society*, 91, 3493-3503.
- 239) Esmaeaelzadeh, S. and Simchi, A. (2008): Foamability and compressive properties of AlSi7-3 vol.% SiC-0.5 wt.% TiH₂ powder compact. *Materials Letters* 62, 1561-1564.
- 240) Fillabi, M., Simchi, A. and Kokabi, A. (2008): Effect of iron particle size on the diffusion bonding of Fe-5% Cu powder compact to wrought carbon steels. *Materials and Design* 29, 411-417.
- 241) Firouzdar, V., Simchi, A. and Kokabi, A. (2008): An investigation of the densification and microstructural evolution of M2/316L stepwise graded composite during co-sintering. *Journal of Materials Science* 43, 55-63.
- 242) Hafizpour, H. and Simchi, A. (2008): Investigation on the compressibility of Al-SiC composite powders. *Powder Metallurgy* 51, 217-223.
- 243) Imgrund, P., Rota, A. and Simchi, A. (2008): Microinjection molding of 316L/17-4PH and 316L/Fe powders for fabrication of magnetic-nonmagnetic bimetals. *Journal of Materials Processing Technology* 200, 259-264.

- 244) Mahmoudi, M., Simchi, A., Imani, M., Milani, A.S. and Stroeve, P. (2008): Optimal Design and characterization of superparamagnetic iron oxide nanoparticles coated with polyvinyl alcohol for targeted delivery and imaging. *Journal of Physical Chemistry B* 112, 14470-14481.
- 245) Maneshian, M. and Simchi, A. (2008): Solid-state and liquid phase sintering of mechanically activated W-20wt.% Cu powder mixture. *Journal of Alloys and Compounds* 463, 153-159.
- 246) Mazaheri, M., Simchi, A. and Golestani-Fard, F. (2008): Densification and grain growth of nanocrystalline 3Y-TZP during two-step sintering. *Journal of the European Ceramic Society* 28, 2933-2939.
- 247) Rajabi, M., Simchi, A. and Davami, P. (2008): Microstructure and mechanical properties of Al-20Si-5Fe-2X(X=Cu, Ni, Cr) alloys produced by melt-spinning. *Materials Science and Engineering A* 492, 443-449.
- 248) Rajabi, M., Simchi, A., Vahidi, M. and Davami, P. (2008): Effect of particle size on the microstructure of rapidly solidified Al-20Si-5Fe-2X(X=Cu, Ni, Cr) powder. *Journal of Alloys and Compounds* 466, 111-118.
- 249) Simchi, A. (2008): Effect of C and Cu addition on the densification and microstructure of iron powder in the direct laser sintering process. *Materials Letters* 62, 2840-2843.
- 250) Simchi, A. and Godlinski, D. (2008): Effect of SiC particles on the laser sintering of Al-7Si-0.3 Mg alloy. *Scripta Materialia*, 59, 199-202.
- 251) Kamrani S., Simchi A., Riedel R., Seyed Reihani S.M. (2008): Effect of reinforcement volume fraction on the mechanical properties of Al-SiC nanocomposites produced by mechanical alloying and sintering. *Powder Metallurgy* 50(3), 276-282.
- 252) Simchi, A., Kamrani, S., Riedel, R., Seyed Reihani, S. and Kleebe, A. (2009): Effect of reinforcement volume fraction on the mechanical properties of Al-SiC nanocomposites produced by mechanical alloying and sintering. *Journal of Composite Materials*. 44 (3), 313-326.
- 253) Hosseini Monnazah, A., Simchi, A. and Seyed Reihani, S. (2007): Creep behavior of hot extruded Al-5% SiC composite powder. *Materials Science Forum* 534, 861-864.
- 254) Negari, A. N. M., Mamoozy, R., Simchi, A. and Ehsani, N. (2007): Determination of the physical and mechanical properties of iron-based powder materials produced by microwave sintering. *Powder Metallurgy and Metal Ceramics* 46, 423-428.
- 255) Shahmohammadi, M., Simchi, A., Danninger, H., and Arvand, A. (2007): An investigation on the sintering behavior of high strength Al-Zn-Mg-Cu alloy prepared from elemental powders. *Materials Science Forum* 534, 489-492.
- 256) Simchi, A., Ahmadi, R., Reihani, S. and Mahdavi, A. (2007): Kinetics and mechanisms of nanoparticle formation and growth in vapor phase condensation process. *Materials and Design* 28, 850-856.
- 257) Arami, H. and Simchi, A. (2007): Reactive milling synthesis of nanocrystalline Al-Cu/Al₂O₃ nanocomposite. *Materials Science and Engineering A* 464, 225-232.
- 258) Maneshian, M., Simchi, A. and Hesabi, Z. R. (2007): Structural changes during synthesizing of nanostructured W-20wt% Cu composite powder by mechanical alloying. *Materials Science and Engineering A* 445, 86-93.
- 259) Asgharzadeh, H. and Simchi, A. (2007): Hot Deformation Behavior of P/M Al6061-20% SiC Composite. *Materials Science Forum* 534, 897-900.
- 260) Dashtbayazi, M., Shokuhfar, A. and Simchi, A. (2007): Artificial neural network modeling of the mechanical alloying process for synthesizing of metal matrix nanocomposite powders. *Materials Science and Engineering A* 466, 274-283.
- 261) Imgrund, P., Rota, A., Petzoldt, F. and Simchi, A. (2007): Manufacturing of multi-functional micro parts by two-component metal injection molding. *International Journal of Advanced Manufacturing Technology* 33, 176-186.
- 262) Kamrani, S., Simchi, A., Riedel, R. and Seyed Reihani, S. (2007): Effect of reinforcement volume fraction on mechanical alloying of Al-SiC nanocomposite powders. *Powder Metallurgy* 50, 276-282.
- 263) Dourandish, M., Godlinski, D. and Simchi, A. (2007): 3D Printing of Biocompatible PM-Materials. *Materials Science Forum* 534, 453-456.
- 264) Simchi, A., Rota, A. and Imgrund, P. (2006): An investigation on the sintering behavior of 316L and 17-4PH stainless steel powders for graded composites. *Materials Science and Engineering A* 424, 282-289.

- 265) Simchi, A., and Veltl, G. (2006): Behavior of metal powders during cold and warm compaction. *Powder Metallurgy* 49, 281-287.
- 266) Simchi, A. (2006a): Densification and microstructural evolution during co-sintering of Ni-base superalloy powders. *Metallurgical and Materials Transactions A* 37, 2549-2557.
- 267) Simchi, A. (2006b): Direct laser sintering of metal powders: mechanism, kinetics, and microstructural features. *Materials Science and Engineering A* 428, 148-158.
- 268) Petzoldt, F., Pohl, H., Simchi, A. and Alcantara, B. (2006): DMLS gets an expert once-over. *Metal Powder Report* 61, 10-13.
- 269) Esmaeelzadeh, S., Simchi, A. and Lehmkus, D. (2006): Effect of ceramic particle addition on the foaming behavior, cell structure and mechanical properties of P/M AlSi7 foam. *Materials Science and Engineering A* 424, 290-299.
- 270) Filabi, M., Kokabi, A.H. and Simchi, A. (2006): Effect of particle size on the bond strength of diffusion bonded Fe-5%Cu to wrought carbon steel. *Int. J. Iranian Science and Technology* 17, 41-46 (in Persian).
- 271) Hesabi, Z. R., Simchi, A. and Reihani, S. (2006): Structural evolution during mechanical milling of nanometric and micrometric Al₂O₃ reinforced Al matrix composites. *Materials Science and Engineering A* 428, 159-168.
- 272) Khakbiz, M., Simchi, A., and Bagheri, R. (2005a): Analysis of the rheological behavior and stability of 316L stainless steel-TiC powder injection molding feedstock. *Materials Science and Engineering A* 407, 105-113.
- 273) Simchi, A. and Danninger, H. (2005): Electrical conductivity- A nondestructive tool for assessing the mechanical properties of sintered steels. *Powder metallurgy Progress* 5, 115-122.
- 274) Khakbiz, M., Simchi, A. and Bagheri, R. (2005): Investigation of rheological behavior of 316L stainless steel-3 wt-% TiC powder injection molding feedstock. *Powder Metallurgy* 48, 144-150.
- 275) Ahmadi, R., Simchi, A. and Seyed Reyhani, S. (2005): Production of silver nanometric powders via inert gas condensation (IGC) method. *Amirkabir Journal of Science and Technology* 16, 103-107 (in Persian).
- 276) Asgharzadeh, H. and Simchi, A. (2005): Effect of sintering atmosphere and carbon content on the densification and microstructure of laser-sintered M2 high-speed steel powder. *Materials Science and Engineering A* 403, 290-298.
- 277) Tavakoli, A., Simchi, A. and Seyed Reihani, S. (2005): Study of the compaction behavior of composite powders under monotonic and cyclic loading. *Composites Science and Technology* 65, 2094-2104.
- 278) Yahosseini, M., Simchi, A., Varahram, N., and Davami, P. (2005): Modeling of rapid solidification process in the gas atomization of molten metals. *Iranian Journal of Materials Science and Engineering* 2, 1-7.
- 279) Simchi, A., Tavakoli, A. and Seyed Reyhani, S. (2005): Study of the compaction behavior of composite powders under monotonic and cyclic loading. *Composites Science and Technology* 65, 2094-2104.
- 280) Asgharzadeh H. and Simchi, A. (2005): An investigation on laser sinterability of M2 high-speed steel powder. *Amirkabir Journal of Science and Technology* 16, 9-17 (in Persian).
- 281) Simchi, A. and Pohl, H. (2004): Direct laser sintering of iron-graphite powder mixture. *Materials Science and Engineering A* 383, 191-200.
- 282) Simchi, A. and Asgharzadeh, H. (2004): Densification and microstructural evaluation during laser sintering of M2 high-speed steel powder. *Materials Science and Technology* 20, 1462-1468.
- 283) Simchi, A. and Danninger, H. (2004): Effects of porosity on delamination wear behavior of sintered plain iron. *Powder Metallurgy* 47, 73-80.
- 284) Simchi, A. (2004): The role of particle size on the laser sintering of iron powder. *Metallurgical and Materials Transactions B* 35, 937-948.
- 285) Asgharzadeh, H., Azami, M. and Simchi, A. (2004): Assessment and selection of direct rapid tooling processes using analytical hierarchy process. *Research Journal of Sharif University of Technology* 20, 3-14 (in Persian).
- 286) Khakbiz, M. and Simchi, A. (2003): Effect of SiC addition on the compactibility and sintering behavior of M2 high-speed steel powder. *P/M Science and Technology Briefs* 5, 23-27.
- 287) Simchi, A. and Khakbiz, M. (2003): Densification and microstructure formation of systems based on HSS M2-SiC-Cu at low-temperature vacuum sintering. *Powder Metallurgy Progress* 3, 165-174.

- 288) Simchi, A. (2003): Effects of lubrication procedure on the consolidation, sintering and microstructural features of powder compacts. *Materials and Design* 24, 585-594.
- 289) Simchi, A. (2003): Microstructure and densification relationship to the manufacturing parameters in laser sintering of iron powders. *Amirkabir* 14, 780-789.
- 290) Simchi, A. and Veltl, G. (2003): Investigation of warm compaction and sintering behavior of aluminum alloys. *Powder Metallurgy* 46, 159-164.
- 291) Simchi, A. and Pohl, H. (2003): Effects of laser sintering processing parameters on the microstructure and densification of iron powder. *Materials Science and Engineering A* 359, 119-128.
- 292) Simchi, A., Petzoldt, F., and Pohl, H. (2003): On the development of direct metal laser sintering for rapid tooling. *Journal of Materials Processing Technology* 141, 319-328.
- 293) Simchi, A. and Danninger, H. (2002): Microstructural changes in Mo steels during sintering and effect on electrical conductivity. *Powder Metallurgy* 45, 307-314.
- 294) Simchi, A., Danninger, H. and Gierl, C. (2001): Electrical conductivity and microstructure of sintered ferrous materials: iron-graphite compacts. *Powder Metallurgy* 44, 148-156.
- 295) Simchi, A., Petzoldt, F. and Pohl, H. (2001): Direct metal laser sintering: Material considerations and mechanisms of particle bonding. *International Journal of Powder Metallurgy* 37, 49-61.
- 296) Simchi, A., Petzoldt, F., Pohl, H. and Löffler, H. (2001): Direct laser sintering of a low alloy P/M steel. *P/M Science and Technology Briefs* 3, 5-9.
- 297) Simchi, A., Danninger, H. and Weiss, B. (2000): Microstructural modeling of electrical conductivity and mechanical properties of sintered ferrous materials. *Powder Metallurgy* 43, 219-227.
- 298) Simchi, A., Petzoldt, F., Pohl, H. and Löffler, H. (2000): A new steel powder mixture for direct laser sintering. *Rapid Prototyping Tooling Newsletter* 4, 4-5.
- 299) Youzbashizadeh, H., Simchi, A., Moradkhani, D., Ashtari, M., Khorsand, H. and Davami, P. (2000): The role of microstructure in mechanical behaviors of low-alloy sintered steels. *Scientia Iranica* 7, 41-49.
- 300) Simchi, A. and Danninger, H. (2000): Electrical conductivity and microstructure of sintered ferrous materials: sintered iron. *Powder Metallurgy* 43, 209-218.
- 301) Sadrnezhad, K., and Simchi, A. (1999): Simulation of the iron smelting-reduction process. *Materials Science Technology* 15, 121.

D) Presentation in academic conferences

- 1) Simchi, A., Saeidi, M., (2022): Low-dimensional Carbon-based Materials for Sensing & Sustainable Energy Applications, 13th congress of Iranian ceramic society, 22-25 May 2022, TEHRAN, IRAN.
- 2) Simchi, A., (2022): Sustainable Materials at Nano-Bio Interface, The mutual conference between Sharif University of Technology, Iran and Shanghai Jiao Tong University, China (Online).
- 3) Simchi, A., Petzoldt F., Hartwig T. (2021): 3D Binder Jet Printing of Ti Alloy for Potential Applications in Biomedicine, EURO PM 2021 Congress and Exhibition, 14-22 October (Online).
- 4) Saeidi M, Lee MJ, Okello OFN, Choi SY, Oh SS, Simchi A., (2020): Gold Tetrapod Decorated Three-dimensional Graphene: Synthesis and Characterization, 8th International Conference on Nanostructures (ICNS8), 18-20 November 2020, TEHRAN, IRAN.
- 5) Hasanzadeh Azar M, Mohammadi M, Tabatabaei Rezaei N, Ayneband S, (2020): Enhanced Stability of FAPbI₃ Perovskite Quantum Dots by Silica Coating, 8th International Conference on Nanostructures (ICNS8), 18-20 November 2020, TEHRAN, IRAN.
- 6) Kafili G., Tamjid E., Niknezhad H., Simchi A, (2020): Processing of a temperature-responsive human amniotic membrane-derived hydrogel for soft tissue engineering by 3D bioprinting, 14th International Seminar on Polymer Science and Technology (ISPST), 9-12 November 2020, TEHRAN, IRAN.
- 7) Mohandes F, Simchi A., Hybrid Magneto-Fluorescent Nanoparticles for in Vivo Imaging of Tumors in Animal Models, 8th International Conference on Nanostructures (ICNS8), 18-20 November 2020, TEHRAN, IRAN.

- 8) Kafili G, Tamjid E, Niknejad H, Simchi A., (2020): Rheological behavior of amniotic membrane-based hydrogel containing Laponite nanoparticles, 8th International Conference on Nanostructures (ICNS8), 18-20 November 2020, TEHRAN, IRAN.
- 9) Golafshan E, Mashayekhan Sh., Shokrgozar MA., Simchi A., (2020): Nanofibrous piezoelectric PVDF-graphene scaffolds for cardiac tissue engineering, Royan International Twin Congress, Reproduction Biomaterials and Stem Cells, 2-6 September 2020, TEHRAN, IRAN.
- 10) Hatamie A, Hemmati A, Mahmoodi A, Rahmatia R, Nobakht V, Simchi A., (2020): Amperometric glucose sensing based on the binary electrocatalytic effect of nanorod arrays of Co-organic framework grown on porous nickel electrode, 8th International Conference on Nanostructures (ICNS8), 18-20 November 2020, TEHRAN, IRAN.
- 11) Rouien Z, Pishbin F, Jafari H, Simchi A., (2020): Developing of a polymeric coating containing bioactive glass 45S5 on magnesium and investigating its biocompatibility and corrosion resistance, 8th International Conference on Nanostructures (ICNS8), 18-20 November 2020, TEHRAN, IRAN.
- 12) Khiarak BN, Mojaddami M, Simchi A., (2019): Novel electrocatalysts based on 3D graphene and transition metals for water splitting, 4th Iranian Applied Chemistry Conference, 23-25 July 2019, Orumiyeh, West Azerbaijan, Iran
- 13) Lotfi R., Simchi, A., (2019): The role of processing parameters on the synthesis and characterization of few-atomic thick Ti₃C₂ MXene phase, IITER, 18th September 2019, Istanbul, Turkey.
- 14) Simchi, A., Mazhaheer, B., Aashuri, H. (2018): Graphene/nanorod composites for enzymatic and non-enzymatic electrochemical biosensing: Application to glaucous detection, Carbon 2018 Conference, 1-6 June 2018, Madrid, Spain.
- 15) Tamjid, E., Mahmoudi, N., Simchi, A. (2018): Effect of graphene oxide nanosheets on the physicochemical properties and biological performance of electrospun polymeric nanofibers, Carbon 2018 Conference, 1-6 June 2018, Madrid, Spain.
- 16) Tamjid, E., Mahmoudi, N., Simchi, A. (2018): Graphene-modified temporary skin grafts: Fabrication and in vivo assay, Carbon 2018 Conference, 1-6 June 2018, Madrid, Spain.
- 17) Simchi, A. (2018): 2D nanomaterials for biomedical and biosensing applications, 7th Conference on Nanostructures, 27 Feb. -1 March 2018, Tehran, Iran.
- 18) Angizi, Sh., Simchi, A. (2018): Synthesis and investigation on methyl functionalized boron nitride Nano Sheets, 7th Conference on Nanostructures, 27 Feb. -1 March 2018, Tehran, Iran.
- 19) Soviezi, S., Buki, M.R.R.T., Ghanbari, H., Simchi, A. (2018): Optimization maps for large-area growth of MoS₂ and WS₂ Nanosheets by the Atmospheric Pressure Chemical Vapour Deposition Technique, 7th Conference on Nanostructures, 27 Feb. -1 March 2018, Tehran, Iran.
- 20) Simchi, A., Asgharzadeh, H. (2018) On the development of Al matrix nanocomposites for the automotive industry: Compaction, Sintering, hot deformation and mechanical properties, 6th International Conference on Powder Metallurgy for Automotive Parts, 16-18 April 2018, Isfahan, Iran
- 21) Mansouri, M., Simchi, A., (2018) Melt spinning of ultrahigh strength aluminum-based amorphous alloys for automotive applications, 6th International Conference on Powder Metallurgy for Automotive Parts, 16-18 April 2018, Isfahan, Iran.
- 22) Simchi, A., Mansourib, M., Park, E.S., Varahrama, N. (2016): Melt Spinning of Amorphous Aluminum Alloys Containing Transition (Ni, Fe, Cu) and Mish Metals: Thermal Stability and Nano-crystallization, Euro PM2016 Congress & Exhibition, 13-15 October (2016). Hamburg, Germany.
- 23) Simchi, A., Mobarhan, M.A. (2016): Hot Deformation Behavior of P/M Al-SiC nanocomposites, Euro PM2016 Congress & Exhibition, 13-15 October (2016). Hamburg, Germany.
- 24) Eslahi, N., Simchi, A. (2016): Thermoresponsive polymeric hydrogels for cartilage tissue engineering, 12th International Seminar on Polymer Science and Technology, 2-5 November 2016, Islamic Azad University, Tehran, Iran.
- 25) Tavakoli, M.M., Simchi, A. (2016): Graphene Nanostructures for Colloidal Quantum Dot Photovoltaic Devices, 7-10 March (2016), Kish Island, Iran
- 26) Mahmoudi, N., Eslahi, N., Simchi, A. (2016): Mechanical and cytotoxicity properties of Chitosan/PVP/GO Electrospun Nanofibers for Skin Tissue Engineering, 7-10 March (2016), Kish Island, Iran.

- 27) Ordikhani, F., Simchi, A. (2014): Electrophoretic Deposition of Chitosan-Graphene oxide Nanocomposite Coatings on Titanium Implants, 5th Conference on Electrophoretic Deposition: Fundamentals and Applications, 5-10 October 2014, Hertshtin, Austria.
- 28) Tamjid, E., Simchi, A., Bagheri, R. and Vossoughi, M. (2013): Kinetics of tissue growth in 3D polymer-based nanocomposite scaffolds: Effect of particle size on cell proliferation and differentiation. The first Iranian annual congress on progress in tissue engineering and regenerative medicine, May 2014 (in Persian).
- 29) Mahmoudi, N., Ostadhossein, F. and Simchi, A. (2014): Chitosan/Polyvinyl Pyrrolidone/Nano-layer Graphene Oxide Biocompatible Films for Food Packaging. 5th International Conference on Nanostructures, ICNS5, March 2014.
- 30) Nojoomia, A., Abdolrahima, M., Shahsavarib, S., Simchi, A. and Madaah Hosseini, H. (2014): A Novel Nano-hybrid BSA Conjugated Poly-(ethylene oxide) System as an Advanced Gene Transfection Agent. 5th International Conference on Nanostructures, ICNS5, March 2014.
- 31) Ordikhani, F., Ramezani Farani, M. and Simchi, A. (2014): Electrophoretic deposition of drug-eluting graphene oxide/chitosan coatings on orthopedic implants for enhanced bactericidal capacity. 5th International Conference on Nanostructures, ICNS5, March 2014.
- 32) Akbarpour, M. R., Salahi, E., Hesari, F., Simchi, A. and Kim H. S. (2012): Fabrication and Mechanical properties of nanostructured Cu reinforced with SiC nanoparticles. 4th International Congress on Nanoscience and Nanotechnology, ICNN2012, September 2012.
- 33) Ebadzadeh, T., Vaezi, M. R., simchi, A. and Kim, H. S. (2012): Effect of Nano Al₂O₃ Addition on the Formation of NiTi During Mechanical Alloying, 4th International Congress on Nanoscience and Nanotechnology, ICNN2012, September 2012.
- 34) Akbarpour, M.R., Salahi E., Alikhani, Hesari, F., Simchi, A. and Kim, H.S. (2012): Effect of SiC nanoparticles on the dispersion of carbon nanotubes and grain refinement in Cu/MWCNTs composites. The first international and the sixth joint conference of Iranian metallurgical engineering society and Iranian Foundrymen society, 2012 (in Persian).
- 35) Farvizi, M., Ebadzade, T., Vaezi, M.R., Simchi, A. and Kim, H. S. (2012): Wear behavior of Al₂O₃-NiTi Shape Memory Based Composites. The first international and the sixth joint conference of Iranian metallurgical engineering society and Iranian Foundrymen society, 2012.
- 36) Maleki, H., Durães, L. Portugal, A. and Simchi, A. (2012): Synthesis of Fe₃O₄@Au Core-Shell Nanoparticles for possible biomedical applications, 4th International Conference on Nanostructures, ICNS4, March 2012.
- 37) Asgharzadeh, H., Bayazid, M Simchi, A. (2012): An Investigation on the Precipitation Hardening of an Ultrafine Grained Al₆063-Al₂O₃ Nanocomposite, Euro PM2012, September 2012.
- 38) Asgharzadeh, H. and Simchi, A. (2012): Constitutive Analysis and Microstructural Evolution in Hot Working of Nanostructured Al₆063, Euro PM2012 congress in Basel, 16th – 19th September 2012.
- 39) Asgharzadeh, H., Simchi, A. and Kim, H.S. (2011): Microstructural features and tensile properties of a nanostructured Al₆063-Al₂O₃ nanocomposite. 3rd International Conference on Ultrafine Grained and Nanostructured Materials, November 2011.
- 40) Maleki, H., Simchi, A., Imani, M. and M. Mahmoudi (2011): M. Optimized nanoemulsion synthesis of mono-dispersed Fe₃O₄ magnetic nanoparticles for biomedical applications and cytotoxicity studies. 24th European Conference on Biomaterials, September 2011.
- 41) Tamjid, E., Simchi, A., Kommareddy, K. P., Dunlop, J. Bagheri, R., Vossoughi, M., and Fratzl, P. (2011): In vitro tissue growth in three-dimensional scaffolds of PCL-TiO₂ nanocomposite prepared by an indirect 3D printing process. Euro BioMat 2011, April 2011.
- 42) Mahmoudi, N., Simchi, A. and Kafrou, A. (2010): Hydrogen desorption properties of nanocomposite MgH₂-TiCr_{1.2}Fe_{0.6} synthesized by high-energy mechanical alloying. Powder Metallurgy World Congress and Exhibition, PM2010, October 2010.
- 43) Simchi, A. and Godlinski, D. (2010): Direct laser sintering of aluminum matrix composites. Powder Metallurgy World Congress and Exhibition, PM2010, October 2010.
- 44) Simchi, A., Petzoldt, F., Hartwig, T. and Veltl, G. (2010): Sintering of WC-10Co/316L stainless-steel composite parts made by assembling of the PIM parts. Powder Metallurgy World Congress and Exhibition, PM2010, October 2010.

- 45) Asgharzadeh, H., Simchi, A. and Kim, H. S. (2010): High-temperature strength and deformation behavior of Al6063/Al₂O₃ nanocomposite produced by mechanical alloying and hot extrusion. Powder Metallurgy World Congress and Exhibition, PM2010, October 10-14, 2010.
- 46) Dourandish, M., Simchi, A. and Hokamoto, K. (2010): Pressureless sintering of stainless steels/zirconia composite layers usable for the co-powder injection molding process. Powder Metallurgy World Congress and Exhibition, PM2010, October 2010.
- 47) Asgharzadeh, H. and A. Simchi (2010): Processing of nanostructured Aluminum matrix nanocomposites: Microstructure and mechanical properties. 4th International Joint Conference on Integrated System Design and Technology, ISTD 2010, June 2010, Siegen.
- 48) Tamjid, E. Simchi, A., Bagheri and R. Vossoughi, M. (2010): Effect of particle size on the in vitro bioactivity of PCL/bioactive glass composite scaffolds. 14th European Conference on Composite Materials, ECCM14, June 2010.
- 49) Asgharzadeh, H. Simchi, A. and Kim, H. S. (2010): Microstructural features and tensile properties of Al-Mg-Si/1vol% Al₂O₃ Nanocomposite. 14th European Conference on Composite Materials, ECCM14, June 2010.
- 50) Pishbin, F. Simchi, A. Ryan, M. P. and Boccaccini, A. R. (2010): Electrophoretic deposition (EPD) of bioactive orthopedic composite coatings. International Conference on Orthopaedic Surgery, Biomechanics and Clinical Applications, June 2010.
- 51) Tamjid, E., Bagheri, R., Vossoughi, M. and Simchi, A. (2010): Shape-controlled synthesis of TiO₂ nanostructures. 3rd Conference on Nanostructures, NS2010, March 2010 (in Persian).
- 52) Khakpash, N., Simchi, A. and Jafari, T. (2010): Chemical vapor synthesis of V-doped TiO₂ nanoparticles and characterization of their photocatalytic activity. 3rd Conference on Nanostructures, NS2010, March 2010 (in Persian).
- 53) Naghibi nezhad, M., Simchi, A. and Askari, M. Molecular dynamic simulation of surface growth of metal clusters in gas phase condensation processes. 3rd Conference on Nanostructures, NS2010, March 2010 (in Persian).
- 54) Asgharzadeh, H. and Simchi, A. (2010): Mechanical properties of nano-alumina reinforced Al 6063 nanocomposites produced by reactive mechanical milling and hot extrusion. 3rd Conference on Nanostructures, NS2010, March 2010 (in Persian).
- 55) Jafari, T., Simchi, A. and Khakpash, N. (2010): Reverse micelle synthesis of functional superparamagnetic Fe/Au nanoparticles for MRI imaging and assessment of cytotoxicity. 3rd Conference on Nanostructures, NS2010, March 2010 (in Persian).
- 56) Gheyhani, S., Shervin, S. h. and Simchi, A. (2010): Synthesis of carbon nanotubes by an iron-catalyzed liquid-arc method. 3rd Conference on Nanostructures, NS2010, March 2010 (in Persian).
- 57) Mazaheri, M., Simchi, A. and Golestanifard, F. (2010): The effect of shape forming and sintering methods on properties of 8 mol%-Y₂O₃ stabilized nanostructured zirconia bodies. 3rd Conference on Nanostructures, NS2010, March 2010 (in Persian).
- 58) Soroush, S., Simchi, A. and Nemati, A. (2010): Hydrothermal synthesis of barium titanate nanoparticles and study of the densification behavior during sintering. 3rd Conference on Nanostructures, NS2010, March 2010 (in Persian).
- 59) Delavari, H., Shidpour, R., Madaah Hossini, H. and Simchi, A. (2010): The Influence of Edge and Corner of Nanoparticles on Curie Temperature. 3rd Conference on Nanostructures, NS2010, March 2010 (in Persian).
- 60) Tamjid, E., Bagheri, R., Vossoughi, M., and Simchi, A. (2010): Effect of shape of titania nanoparticles on the bioactivity of PCL-based composite scaffolds used for tissue engineering. NMC3-IUMS, February 2010 (in Persian).
- 61) Pishbin, F. Simchi, A., Ryan, M. P. and Boccaccini, A. R. (2009): Progress in electrophoretic deposition (EPD) of bioactive glass and bioactive glass-biopolymer composite coatings. 4th International Conference of Shaping Advanced Ceramics, November 2009.
- 62) Dourandish, M., Simchi, A. and Hartwig, T. (2008): Sintering of Zirconia/403 Stainless Steel Bilayers for Co-Powder Injection molding. European Powder Metallurgy Congress and Exhibition, Euro PM2008, September 2008.
- 63) Rajabi, M., Simchi, A. and Davami, P. (2008): Processing of Al-20Si-5Fe-X (X=Cu, Ni, Cr) by Melt-Spinning and Hot-Pressing. European Powder Metallurgy Congress and Exhibition, Euro PM2008, September 2008.

- 64) Simchi, H. and Simchi, A. (2008): Desorption Properties of Nanostructured MgH₂ Synthesized by High Energy Mechanical Milling. European Powder Metallurgy Congress and Exhibition, Euro PM2008, September 2008.
- 65) Dourandish, M., Simchi, A. and Hokamoto, K. (2008): Joining of Zirconia to Stainless Steel for High-Temperature Applications. Second Yellow Sea Rim Workshop on Explosion, Combustion and other Energetic Phenomena, September 2008.
- 66) Dourandish, M., Simchi, A. and Godlinski, D. (2007): Fabrication of Porosity-Graded Biocompatible Structures by 3D Printing of Co-Cr-Mo. European Powder Metallurgy Congress and Exhibition, Euro PM2007, October 2007.
- 67) Razavi Hessabi, Z., Simchi, A. and Seyed Reihani, S. M. (2007): Mechanical Properties of Al-Al₂O₃ Nanocomposite Produced by Mechanical Milling and Hot Powder Extrusion. European Powder Metallurgy Congress and Exhibition, Euro PM2007, October 2007.
- 68) Rajabi, M., Simchi, A. and Davami, P. (2007): Microstructural Features of Rapidly Solidified Al-20Si-5Fe-2X(Cr, Ni or Cu) Powders. European Powder Metallurgy Congress and Exhibition, Euro PM2007, October 2007.
- 69) Simchi, A. (2006): Characterization of Nanosized Tin Oxide Powders Synthesized by In-Situ Oxidation of Tin Vapour in Low Vacuum Gas Condensation Process. First International Congress on Nanoscience and Nanotechnology, December 2006.
- 70) Maneshian, M. H. and Simchi, A. (2006): Processing and Characterization of Nanostructured W-20W%Cu Composite. First International Congress on Nanoscience and Nanotechnology, December 2006.
- 71) Tamjid, E., Simchi, A. and Hartwig, T. (2006): Co-sintering of Nanoscaled Zirconia Powder to Stainless Steels for Manufacturing Functionally Graded Composite Layers. First International Congress on Nanoscience and Nanotechnology, December 2006.
- 72) Simchi A. and Kohi P. (2006): Processing of Tin Oxide Nanoparticles by Inert Gas Condensation Method and Characterization. 2006 Powder Metallurgy World Congress and Exhibition, September 2006.
- 73) Dourandish, M., Godlinski, D. and Simchi, A. (2006): 3D Printing of Biocompatible PM-Materials. Powder Metallurgy World Congress and Exhibition, September 2006.
- 74) Firouzdar, V., Simchi, A. and Kokabi, A. H. (2006): Co-sintering of M2/316L Layers for Fabrication of Graded Composite Structures. Powder Metallurgy World Congress and Exhibition, September 2006.
- 75) Hosseini Monnazah, A., Simchi, A. and Seyed Reihani, S. M. (2006): Creep Behavior of Hot Extruded Al-5%SiC Composite Powder. Powder Metallurgy World Congress and Exhibition, September 2006.
- 76) Shahmohammadi, M., Simchi, A., Danninger, H. and Arvand, A. (2006): Investigation on the Sintering Behavior of P/M Al-Zn-Mg-Cu Alloy. 2006 Powder Metallurgy World Congress and Exhibition, September 2006.
- 77) Simchi, A. and Petzoldt, F. (2006): Densification Kinetics of Steel Powders during Direct Laser Sintering. 2006 Powder Metallurgy World Congress and Exhibition, September 2006.
- 78) Asgharzadeh, H. and Simchi, A. (2006): Hot Deformation Behavior of P/M Al6061-20% SiC Composite. 2006 Powder Metallurgy World Congress and Exhibition, September 2006.
- 79) Simchi, H. and Simchi, A. (2006): Effect of Nanometric Alumina Particles on the Mechanical Properties of Extruded Copper. 10th Annual Congress of the Iranian Metallurgy Association, November 2006 (in Persian).
- 80) Asgharzadeh, H. and Simchi, A. (2006): Hot Deformation of Powder Extruded Al6061 Alloy. 10th Annual Congress of the Iranian Metallurgy Association, November 2006 (in Persian).
- 81) Razavi Hessabi, Z., Simchi, A. and Sanjari, M. (2006): Production of Al-Al₂O₃ Nanocomposite via Mechanical Milling and Hot Extrusion. MATFORM'85, May 2006 (in Persian).
- 82) Hafizpour, H., Simchi, A. and Akhgar, J. M. (2006): Effect of Reinforcement Particle Size on Formability and Consolidation of Al-SiC Composite Powders. MATFORM'85, May 2006 (in Persian).
- 83) Simchi, A. and Razavi Hessabi, Z. (2006): Processing of Nanostructured Metal Matrix Nanocomposites and Characterization. The First Conference on Nanostructures, March 2006 (in Persian).

- 84) Khalili, S., Simchi, A. and Bagheri, R. (2006): Microstructure and Mechanical Properties of Al6061-SiC Composites Produced by Powder Extrusion Route. ICMM 2006, March 2006.
- 85) Simchi, A. and Danninger, H. (2005): A Nondestructive Method for Assessing the Mechanical Properties of Sintered Steels. International Conference on Deformation and Fracture of Structural P/M Materials, DF PM 2005, September 2005.
- 86) Simchi, A., Petzoldt, F. and Hartwig, T. (2006): An Approach for Assessment of Sintering Behavior of Co-injection Molded PIM Feedstocks by Dilatometric Analysis. European Powder Metallurgy Congress and Exhibition, Euro PM 2005, October 2006.
- 87) Simchi, A., Petzoldt, F. and Pohl, H. (2005): Direct Metal Laser Sintering of Fe-C-Cu Powder. European Powder Metallurgy Congress and Exhibition, Euro PM 2005, October 2006.
- 88) Petzoldt, F., Pohl, H., Simchi, A., and Alcantara, B. (2005): advanced Steel Powder for Direct Metal Laser Sintering. European Powder Metallurgy Congress and Exhibition, Euro PM 2005, October 2006.
- 89) Imgrund, P., Rota, A. and Simchi, A. (2005): Co-sintering of Magnetic-Nonmagnetic Components by Micro Co-injection Molding Process. Sintering05, August 2005.
- 90) Esmaealzadeh, S., Simchi, A. and Lehmhus, D. (2005): Effect of SiC Addition on the Foaming Behavior and Mechanical Properties of AlSi7-TiH₂ Composite Foams. MetFoam 2005, September 2005.
- 91) Veltl, G., Petzoldt, F., Simchi, A., Sonsino, C.M., Lipp, K. and Eksi, A. (2005): Warmkompaktieren von Aluminumpulver – Mechanismen und Einfluss auf die Eigenschaften. 2005.
- 92) Simchi, A. and Petzoldt, F. (2005): Co-sintering of 316L/17-4PH Stainless Steel Powders. 5th International Conference on Powder Metallurgy for Automotive Parts, PM Auto'05, April 2005 (in Persian).
- 93) Dourandish, M., Simchi, A. and Bagheri, R. (2005): Low-Pressure Injection Molding of Low-Alloy High Strength Cr-Mo Steel Powder. 5th International Conference on Powder Metallurgy for Automotive Parts, PM Auto'05, April 2005 (in Persian).
- 94) Esmaealzadeh, S., Simchi, A. and Seyyed Reihani, S.M. (2005): Development of AlSi7-SiC Foams for Automotive Application. 5th International Conference on Powder Metallurgy for Automotive Parts, PM Auto'05, April 2005 (in Persian).
- 95) Simchi, A. and Veltl, G. (2004): Development of Warm Compaction for Aluminum Alloys. 2004 World Congress and Exhibition, PM2004, October 2004.
- 96) Simchi, A., Petzoldt, F. and Pohl, H. (2004): Microstructural Features of Laser Sintered Steel Powder. 2004 World Congress and Exhibition, PM2004, October 2004.
- 97) Simchi, A., Khakbiz, M. and Bagheri, R. (2004): Effect of TiC Addition on the Rheological Behavior of 316L Stainless Steel Feedstock. 2004 World Congress and Exhibition, PM2004, October 2004.
- 98) Simchi, A. and Asgharzadeh, H. (2004): Direct Laser Sintering of M2 HSS Steel Powder. 12th Annual (International) Mechanical Engineering Conference, ISME2004, May 2004.
- 99) Ehsani, R. and Simchi, A. (2004): Study of Tribological Behavior of Asbestos-Free Cu-base Brake Lining. 2004 World Congress and Exhibition, PM2004, October 2004.
- 100) Petzoldt, F., Pohl, H., and Simchi, A. (2004): Extending the Scope of Material Properties for Direct Metal Laser Sintering. 2004 World Congress and Exhibition, PM2004, October 2004.
- 101) Tavakoli, A.H., Seyed Reihani, S.M. and Simchi, A. (2004): Effect of Cyclic Compaction on the Consolidation of Al-SiC Composite Powder. PM2004 World Congress and Exhibition, October 2004.
- 102) Tavakoli, A.H., Syed Reihani, S.M. and Simchi, A. (2004): Compaction of MMC powder by Cyclic Compaction. MATFORM'83, May 2004 (in Persian).
- 103) Khalili, S., Bagheri, R., Simchi, A. and Kamankesh, A. (2004): Mechanical Properties of Al-SiC Composite produced by Powder Extrusion. 2nd Iranian Metals and Materials Forming Conference, MATFORM'83, May 2004 (in Persian).
- 104) Ahmadi, R., Simchi, A. and Seyed Reihani, S.M. (2004): Production of Ag and Cu-Sn Nanopowders by IGC Method. 8th Annual Congress of the Iranian Metallurgy Association, October 2004 (in Persian).
- 105) Khalili, S., Bagheri, R. and Simchi, A. (2004): Investigation of the Fracture Behavior of Architectural Modified Al6061-SiC Composite. 8th Annual Congress of the Iranian Metallurgy Association, October 2004 (in Persian).

- 106) Yahossieni, M.S., Simchi, A., Davami, P. and Varahram, N. (2004): Modeling of Rapid Solidification in the Gas atomization Process. 8th Annual Congress of the Iranian Metallurgy Association, October 2004 (in Persian).
- 107) Simchi, A. and Razavi, Z. (2003): Manufacturing of Al Based Nanocomposites. Proc. of Research Activities of Sharif University of Technology, 2003 (in Persian).
- 108) Simchi, A. (2003): Effect of Heat Treatment on the Microstructure and Mechanical Properties of a Low Alloy Laser-Sintered Steel Powder. Proc. of Research Activities of Sharif University of Technology, 2003 (in Persian).
- 109) Pohl, H., Petzoldt, F., Simchi, A. and Malatesta, G. (2003): Improving Mechanical Properties of Direct Laser Sintered Parts by Heat Treatment. 2003 European Powder Metallurgy Congress and Exhibition, Euro PM2003, October 2003.
- 110) Simchi, A. (2003): Effect of Carbon and Phosphorous Additions on the Laser Sintering of Iron Powders. 7th Annual Congress of the Iranian Metallurgy Association, October 2003 (in Persian).
- 111) Shahmirzaie, H. and Simchi, A. (2003): Effect of Sn Additions on the Sintering and Aging Behavior of Aluminum Alloys. 7th Annual Congress of the Iranian Metallurgy Association, October 2003 (in Persian).
- 112) Simchi, A. (2002): The Role of Surface Tension and Viscosity on the Sinterability of Steel Powders in Direct Metal Laser Sintering. Proc. of Research Activities of Sharif University of Technology, 2002 (in Persian).
- 113) Abachi, P., Simchi, A., and Imandar, M. (2002): Effects of Combined Addition of VC and (Ta, Nb) C on Microstructure and Mechanical Properties of WC-10Co Hardmetals. European Conference on Hard Materials and Diamond Tooling, Euro PM 2002, October 2002.
- 114) Simchi, A. (2002): Rapid Inert Making for Plastic Injection Molding Using Direct Metal Laser Sintering. MATFORM'81, May 2002 (in Persian).
- 115) Simchi, A. (2002): Engineered Approach to High-Density Powder Forming Using Die Wall Lubrication Metho. 3rd International Conference on Powder Metallurgy for Automotive Parts (PM Auto'02), April 2002 (in Persian).
- 116) Simchi, A. and Veltl, G. (2002): Warm Compacting of Al Powders for Automotive Applications. 3rd International Conference on Powder Metallurgy for Automotive Parts, PM Auto'02, April 2002 (in Persian).
- 117) Simchi, A., Khakbiz, M. and Safari, M. (2002): Sintering Behavior of SiC/M2 High-Speed Steel Composite. 3rd International Conference on Powder Metallurgy for Automotive Parts, PM Auto'02, April 2002 (in Persian).
- 118) Abachi, P., Imandar, M. and Simchi, A. (2002): Effects of Grain Growth Inhibitors on Microstructure and Mechanical Properties of WC-Co Harmetals Used in Machining of Automotive Parts. 3rd International Conference on Powder Metallurgy for Automotive Parts, PM Auto'02, April 2002 (in Persian).
- 119) Pohl, H., Hennigs, D., Petzoldt, F. and Simchi, A. (2002): Laser Sintering: A New Application of Powder Technology in Automotive Industries. 3rd International Conference on Powder Metallurgy for Automotive Parts, PM Auto'02, April 2002 (in Persian).
- 120) Simchi, A. (2001): Study of Microstructural Development during Laser Sintering of Ferrous Powders. Proc. of Research Activities of Sharif University of Technology, 2001(in Persian).
- 121) Simchi, A. (2001): Densification Mechanism in Direct Laser Sintering of Iron Powders. 5th Annual Congress of the Iranian Metallurgy Association, November 2001(in Persian).
- 122) Simchi, A. and Danninger, H. (2001): Approach for Modeling the Mechanical Properties of Sintered Metals Using a Physical Concept. 2001 European Powder Metallurgy Congress and Exhibition, Euro PM2001, October 2001.
- 123) Petzoldt, F. Pohl, H. and Simchi, A. (2002): Advances in Material Issues for Direct Metal Laser Sintering. 2001 European Powder Metallurgy Congress and Exhibition, Euro PM2001, April 2002(in Persian).
- 124) Pohl, H., Simchi, A., Issa, M. and Dias, H. C. (2001): Thermal Stresses in Direct Metal Laser Sintering. 12th Annual Solid Freeform Fabrication Symposium, August 2001.
- 125) Simchi, A., Pohl, H., and Petzoldt, F. (2001): A Novel Steel Powder for Rapid Tooling Using Direct Metal Laser Sintering. uRapid Conference, May 2001.
- 126) Petzoldt, F., Simchi, A., Pohl, H. and Löffler, H. (2000): Material Concepts for Direct Metal Laser Sintering. 2000 Powder Metallurgy World Congress and Exhibition, PM2000, November 2000.

- 127) Simchi, A., Yoozbashizaadeh, H., Moradkhani, D., Ashtari, M., and Khorsand, H. (1999): The Role of Microstructure on Mechanical Behavior of Low Alloy Sintered Steel. International Conference on Deformation and Fracture of Structural P/M Materials, DF PM 1999, September 1999.
- 128) Simchi, A., Yoozbashizaadeh, H., Khorsand, H., Moradkhani, D. and Ashtari, M. (1999): The Role of Microstructure on the Fatigue Behavior of P/M Steels”, 2nd International Conference on Powder Metallurgy for Automotive Parts, PM Auto’99, April 1999.
- 129) Moradkhani, D., Yoozbashizaadeh, H., Simchi, A., Khorsand, H., Astari, M. and Nategh, S. (1999): The Effect of Nitriding on Wear Resistance of P/M Steels. 3rd Annual Congress of the Iranian Metallurgy Association, October 1999(in Persian).
- 130) Khorsand, H., Yoozbashizaadeh, H., Simchi, A., Ashtari, M., Moradkhani, M. and Ekrami, A. K. (1999): Microstructural Features of Fatigued Sintered Steels. 3rd Annual Congress of the Iranian Metallurgy Association, October 1999 (in Persian).
- 131) Sadrnezhaad, K. Simchi, A. (1998): Simulation of the Iron Smelting-Reduction Process. ICSTI’98 Conference, Iron, and Steel Society, March 1998.
- 132) Simchi, A., Ma’sum, M. A. and Farhmand, A. (1997): Optimization of Secondary Combustion Processes in Steel Smelting Reactors through Heat and Mass Transfer Models. 1st Annual Congress of the Iranian Metallurgy Association, October 1997(in Persian).
- 133) Simchi, A. and Karimi Taheri, A. (1996): Workability of Ti-6242 Alloys at Hot Forging Process. 1st Iranian Conference on Nonferrous Metals, October 1996(in Persian).
- 134) Simchi, A., Sadrnezhaad K. (1996): Simulation of Direct Steelmaking Processes, Steel’75 Symposium, September 1996 (in Persian).