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# CURRICULUM VITAE

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## PERSONAL INFORMATION

Name	Hossein Barani	
Date of birth	21/03/1978	
Family Status	Married, 1 Children	
Nationality	Iranian	
Address	University of Birjand, Birjand, Southern Khorasan, Iran, Postal Code: 9717434765	
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## EDUCATION

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2007 – 2011	<b>Amirkabir University of Technology</b> <b>PhD. in Textile Engineering</b> Thesis: Synthesis of Ag-liposome nano-composites on wool fiber: antibacterial properties and cell toxicity
2002 – 2004	<b>Amirkabir University of Technology</b> <b>M.S. in Textile Engineering</b> Thesis: Preparation of polyacrylonitrile and cellulose acetate blend fibers through wet-spinning
1997 – 2002	<b>Isfahan University of Technology</b> <b>B.S. in Textile Engineering</b> Thesis: Non-aqueous dyeing of cotton fiber with reactive dyes

## ACADEMIC EXPERIENCES

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04. 2016 - PRESENT	<b>University of Birjand, Birjand, Iran</b> Associate Professor of Textile Chemistry
7.2018 – 09.2018	<b>Hochschule Niederrhein, Faculty of Textile and Clothing Technology, University of Applied Sciences Niederrhein, Germany</b> Guest Researcher
08. 2011 – 04. 2016	<b>University of Birjand, Birjand, Iran</b> Assistant Professor of Textile Chemistry
12.2010 – 06.2011	<b>EFSM Group, University of Twente, Enschede, Netherlands</b> Guest Researcher
05.2011 – 06.2011	<b>Polymer Interface Group, Leibniz Institute of Polymer Research Dresden, Germany</b> Guest Researcher

## HONORS AND AWARDS

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2020	<b>National Scholarship Programme of the Slovak Republic (NSP)</b> Scholarship Programme: teaching/research/artistic stay in Slovakia
2020	<b>The Scientific and Technological Research Council of Turkey (TÜBİTAK) grants fellowship for international scientists/researchers:</b> Fellowships for Visiting Scientists and Scientists on Sabbatical Leave
2020	<b>Distinguished Researcher of University of Birjand</b>
2019	<b>National Scholarship Programme of the Slovak Republic (NSP)</b> Scholarship Programme: teaching/research/artistic stay in Slovakia
2018	<b>Distinguish Researcher of University of Birjand</b>
2017	<b>Distinguish Researcher of University of Birjand</b>
2015	<b>Distinguish Assistant Professor of University of Birjand</b>
2014	<b>Distinguish Researcher of University of Birjand</b>
2014	<b>Distinguish Researcher of Art Department</b>

## RESEARCH PROJECTS AND GRANTS

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2019-2020	Project director, <b>“Preparation of antibacterial and UV-protective cotton using microwave irradiation to the in-situ manufacturing of silver nanoparticles”</b> , which was funded with Research and Technology Affairs of University of Birjand and Faculty of Textile and Clothing Technology, the Niederrhein University of Applied Sciences.
2018-2019	Project director, <b>“Development of Antibacterial Electrospun Fiber Mats using Thiosemicarbazone Compounds”</b> , which was funded with Research and Technology Affairs of University of Birjand and Department of Chemistry, University of Cologne.
2014-2016	Project director, <b>“Preparation of antibacterial continuous nanofibrous hybrid yarn”</b> , which was funded with Research and Technology Affairs of University of Birjand.

## RESEARCH INTERESTS

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Production and Properties of Functional Materials  
Biomaterials  
Textile Chemical Technology and Nano-technology  
Electrospinning & nanofibrous structures

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## **KEY PUBLICATIONS**

- 1- **H Barani**, B Mahltig, (2021) Microwave-Assisted Synthesis of Silver Nanoparticles: Effect of Reaction Temperature and Precursor Concentration on Fluorescent Property, Journal of Cluster Science, 1-11
- 2- **H Barani**, A Haseloer, S Mathur, A Klein, (2020) Sustained release of a thiosemicarbazone from antibacterial electrospun poly (lactic-co-glycolic acid) fiber mats, Polymers for Advanced Technologies 31 (12), 3182-3193.
- 3- **H Barani**, M Khorashadizadeh, A Haseloer, A Klein, (2020) Characterization and release behavior of a thiosemicarbazone from electrospun polyvinyl alcohol core-shell nanofibers, Polymers 12(7), 1488.
- 4- **H Barani**, B Mahltig, (2020) Using microwave irradiation to catalyze the in-situ manufacturing of silver nanoparticles on cotton fabric for antibacterial and UV-protective application, Cellulose 27 (15), 9105-9121.
- 5- SN Aboutorabi, M Nasiriboroumand, P Mohammadi, H Sheibani, **H Barani**, (2019) Preparation of Antibacterial Cotton Wound Dressing By Green Synthesis Silver Nanoparticles Using Mullein Leaves Extract, Journal of Renewable Materials 7 (8), 787-794.
- 6- H Maleki, **H Barani**, (2018) Morphological and mechanical properties of drawn poly (l-lactide) electrospun twisted yarns, Polymer Engineering & Science 58 (7), 1091-1096.
- 7- **H Barani**, (2014) Antibacterial continuous nanofibrous hybrid yarn through in situ synthesis of silver nanoparticles: preparation and characterization, Materials Science and Engineering: C 43, 50-57.

## **COMPLETED LIST of PUBLICATIONS at INTERNATIONAL JOURNALS**

- 1- H Daneshafroz, **H Barani**, H Sheibani, (2022) Palladium Nanoparticles-Decorated  $\beta$ -Cyclodextrin-Cyanoguanidine Modified Graphene Oxide: A Heterogeneous Nanocatalyst for Suzuki-Miyaura Coupling and Reduction of 4-Nitrophenol, Journal of Inorganic and Organometallic Polymers and Materials, 1-12,
- 2- **H Barani**, A Miri, H Sheibani, (2021) Comparative study of electrically conductive cotton fabric prepared through the in situ synthesis of different conductive materials, Cellulose 28 (10), 6629-664
- 3- **H Barani**, S Helal Bahr, (2021) Investigation on color and antibacterial properties of woolen yarn dyed with fruit of Ailanthus altissima tree, Journal of Textile Science and Technology 9 (4), 25-33
- 4- **H Barani**, A Miri, H Sheibani, (2021) Comparative study of electrically conductive cotton fabric prepared through the in situ synthesis of different conductive materials, Cellulose, 28, 6629–6649.
- 5- **H Barani**, A Haseloer, S Mathur, A Klein, (2020) Sustained release of a thiosemicarbazone from antibacterial electrospun poly (lactic-co-glycolic acid) fiber mats, Polymers for Advanced Technologies 31 (12), 3182-3193.
- 6- **H Barani**, B Mahltig, (2020) Using microwave irradiation to catalyze the in-situ manufacturing of silver nanoparticles on cotton fabric for antibacterial and UV-protective application, Cellulose 27 (15), 9105-9121.
- 7- **H Barani**, M Khorashadizadeh, (2020) A Haseloer, A Klein, Characterization and release behavior of a thiosemicarbazone from electrospun polyvinyl alcohol core-shell nanofibers, Polymers 12(7), 1488.

- 8- H Maleki, H Barani, (2020) Stereocomplex electrospun fibers from high molecular weight of poly (L-lactic acid) and poly (D-lactic acid), *Journal of Polymer Engineering* 40 (2), 136-142.
- 9- **H Barani**, (2020) Simultaneous Synthesis of Silver Nanoparticles and Natural Indigo Dyeing of Wool Fiber, *Journal of Inorganic and Organometallic Polymers and Materials* 30, 1153–1161.
- 10- SN Aboutorabi, M Nasiriboroumand, P Mohammadi, H Sheibani, **H Barani**, (2019) Preparation of Antibacterial Cotton Wound Dressing By Green Synthesis Silver Nanoparticles Using Mullein Leaves Extract, *Journal of Renewable Materials* 7 (8), 787-794.
- 11- **H Barani**, K Rezaee, H Maleki, (2019) Influence of dyeing conditions of natural dye extracted from *Berberis integerrima* fruit on color shade of woolen yarn, *Journal of Natural Fibers* 16 (4), 524-535.
- 12- SN Aboutorabi, M Nasiriboroumand, P Mohammadi, H Sheibani, **H Barani**, (2018) Biosynthesis of silver nanoparticles using safflower flower: structural characterization, and its antibacterial activity on applied wool fabric, *Journal of Inorganic and Organometallic Polymers and Materials* 28 (6), 2525-2532.
- 13- H Maleki, R Semnani Rahbar, MM Saadatmand, **H Barani**, (2018) Physical and morphological characterisation of poly (L-lactide) acid-based electrospun fibrous structures: tuning solution properties, *Plastics, Rubber and Composites* 47 (10), 438-446.
- 14- M Nasiriboroumand, M Montazer, **H Barani**, (2018) Preparation and characterization of biocompatible silver nanoparticles using pomegranate peel extract, *Journal of Photochemistry and Photobiology B: Biology* 179, 98-104.
- 15- **H Barani**, A Haji, H Maleki, (2018) Analysis of Lecithin Treatment Effects on the Structural Transformation of Wool Fiber using Vibrational Spectroscopy, *International journal of biological macromolecules* 108, 585-590.
- 16- H Maleki, **H Barani**, (2018) Morphological and mechanical properties of drawn poly (l-lactide) electrospun twisted yarns, *Polymer Engineering & Science* 58 (7), 1091-1096
- 17- **H Barani**, MN Boroumand, S Rafiei, (2017) Application of silver nanoparticles as an antibacterial mordant in wool natural dyeing: synthesis, antibacterial activity, and color characteristics, *Fibers and Polymers* 18 (4), 658-665.
- 18- **H Barani**, MN Boroumand, (2016) Alkaline treatment effect on the properties of in-situ synthesised ZnO nanoparticles on cotton fabric, *IET nanobiotechnology* 10 (3), 162-168.
- 19- MN Boroumand, M Montazer, **H Barani**, (2016) Biocompatible stabilize silver nanoparticles and their antimicrobial activity, *Advanced Science Letters* 22 (3), 616-621.
- 20- **H Barani**, A Haji, (2015) Analysis of structural transformation in wool fiber resulting from oxygen plasma treatment using vibrational spectroscopy, *Journal of Molecular Structure* 1079, 35-40.
- 21- **H Barani**, M Montazer, N Samadi, T Toliyat, MK Zadeh, B de Smeth, (2014) Application of nano silver/lecithin on wool through various methods: antibacterial properties and cell toxicity, *Journal of engineered fibers and fabrics* 9 (4), 126-134.
- 22- **H Barani**, M Montazer, HG Braun, V Dutschk, (2014) Stability of colloidal silver nanoparticles trapped in lipid bilayer: effect of lecithin concentration and applied temperature, *IET nanobiotechnology* 8 (4), 282-289.

- 23- **H Barani**, (2014) Preparation of antibacterial coating based on in situ synthesis of ZnO/SiO<sub>2</sub> hybrid nanocomposite on cotton fabric, *Applied surface science* 320, 429-434.
- 24- **H Barani**, A Calvimontes, (2014) Effects of oxygen plasma treatment on the physical and chemical properties of wool fiber surface, *Plasma Chemistry and Plasma Processing* 34 (6), 1291-1302.
- 25- **H Barani**, (2014) Antibacterial continuous nanofibrous hybrid yarn through in situ synthesis of silver nanoparticles: preparation and characterization, *Materials Science and Engineering: C* 43, 50-57.
- 26- **H Barani**, (2014) Surface activation of cotton fiber by seeding silver nanoparticles and in situ synthesizing ZnO nanoparticles, *New Journal of Chemistry* 38 (9), 4365-4370.
- 27- A Haji, **H Barani**, SS Qavamnia, (2013) In situ synthesis of silver nanoparticles onto cotton fibres modified with plasma treatment and acrylic acid grafting, *Micro & Nano Letters* 8 (6), 315-318.
- 28- **H Barani**, M Montazer, A Calvimontes, V Dutschk, (2013) Surface roughness and wettability of wool fabrics loaded with silver nanoparticles: Influence of synthesis and application methods, *Textile research journal* 83 (12), 1310-1318.
- 29- A Haji, **H Barani**, SS Qavamnia, (2013) In situ synthesis and loading of silver nanoparticles on cotton fabric, *Industria Textila* 64 (1), 8-12.
- 30- **H Barani**, MN Broumand, A Haji, M Kazemipur, (2012) Optimization of dyeing wool fibers procedure with *Isatis tinctoria* by response surface methodology, *Journal of natural fibers* 9 (2), 73-86.
- 31- **H Barani**, M Montazer, N Samadi, T Toliyat, (2012) In situ synthesis of nano silver/lecithin on wool: enhancing nanoparticles diffusion, *Colloids and Surfaces B: Biointerfaces* 92, 9-15.
- 32- **H Barani**, H Maleki, (2011) Plasma and ultrasonic process in dyeing of wool fibers with madder in presence of lecithin, *Journal of dispersion science and technology* 32 (8), 1191-1199
- 33- **H Barani**, M Montazer, N Samadi, T Toliyat, (2011) Nano silver entrapped in phospholipids membrane: Synthesis, characteristics and antibacterial kinetics, *Molecular membrane biology* 28 (4), 206-215.
- 34- **H Barani**, M Montazer, T Toliyat, N Samadi, (2010) Synthesis of Ag-liposome nano composites, *Journal of liposome research* 20 (4), 323-329.
- 35- **H Barani**, S Peyvandi, (2010) Enhanced deep coloring of micro polyester fabric, *Materials Science* 16 (2), 138-143.
- 36- **H Barani**, M Montazer, (2008) A review on applications of liposomes in textile processing, *Journal of liposome research* 18 (3), 249-262.
- 37- **H Barani**, SH Bahrami, (2007) Investigation on polyacrylonitrile/cellulose acetate blends, *Macromolecular research* 15 (7), 605-609.
- 38- **H Barani**, SH Bahrami, (2007) Preparation of polyacrylonitrile and cellulose acetate blend fibers through wet-spinning, *Journal of applied polymer science* 103 (3), 2000-2005.

#### SELECTED PUBLICATIONS AT INTERNATIONAL CONFERENCES

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- 1- **H Barani**, H Maleki, (2018) Antibacterial Metal Nanocomposite Coating on Cotton Fabric, AUTEX 2018 World Textile Conference.

- 2- H Maleki, **H Barani**, (2017) Mechanical properties of electrospun poly(l-lactide acid) yarns effect of subsequent drawing process, 9th Central European Conference CEC.
- 3- H Maleki, H Barani, (2016) Antibacterial Poly-l-lactide acid / Polyvinyl alcohol Nanofibrous Hybrid Yarns, 24th International IFATCC Congress.
- 4- H Barani, M N Broumand, (2015) Application of ZnO nanoparticles on cotton fabric and analysis of their antibacterial activity", International Conference on Medical Textiles and Healthcare Products, Poland.
- 5- H Barani, (2014) Antibacterial Poly-L-Lactide Acid/Polyvinyl Alcohol Nanofibrous Hybrid Yarns based on Ag Nanoparticles Synthesis", International Conference on Technical Textiles and Nonwovens, New Delhi.