



TO MAGNIFICO RETTORE OF UNIVERSITA' DEGLI STUDI DI MILANO

ID CODE \_\_5853\_

I the undersigned asks to participate in the public selection, for qualifications and examinations, for the awarding of a type B fellowship at Dipartimento di Physica

Scientist- in - charge: Dr. Simona Achilli

[Name and surname]

## CURRICULUM VITAE

### PERSONAL INFORMATION

Surname	Dehghan
Name	Elmira

### PRESENT OCCUPATION

Appointment	Structure
Postdoc researcher	Turin University

### EDUCATION AND TRAINING

Degree	Course of studies	University	year of achievement of the degree
Degree	Postdoc researcher	turin	2022 until now
Specialization			
PhD	Condensed matter physics	Semnan/ Iran	2015-2019
Master	Condensed matter physics	Semnan/ Iran	2013-2015
Degree of medical specialization			
Degree of European specialization			
Other			

### REGISTRATION IN PROFESSIONAL ASSOCIATIONS

Date	of	Association	City
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registration		

## FOREIGN LANGUAGES

Languages	level of knowledge
English	Advance
Italian	A2

## AWARDS, ACKNOWLEDGEMENTS, SCHOLARSHIPS

Year	Description of award
2016	Ranked 1st among Ph.D. students of physics, class.
2015-2019	Full scholarship, University of Semnan, Semnan, Iran, Ph.D. program.
2013-2015	Full scholarship, University of Semnan, Semnan, Iran, M.Sc. program

## TRAINING OR RESEARCH ACTIVITY

<p>Presently, I am working as a Post-doc researcher in Computational Chemistry and Physics at Turin University, Italy. My primary research interests are Computational Materials Science and Spintronic. I remain interested in magnetic and electric properties in Multiferroic material (bismuth ferrite) and also in my current research, I use density functional theory (DFT) computational and molecular dynamics with some related software and codes such as VASP, CRYSTAL, Quantum ESPRESSO, Quantum ATK, SIESTA, VESTA and RapidMiner (machine learning software) to study on Solid-state battery electrolyte and hydrogen storage material.</p> <p>My PhD thesis was about Spin-dependent Transport and Optical Properties in the Quantum nanorings presence of Rashba Spin-Orbit interaction. I have also graduated my M.Sc. from the University of Semnan. In that course, I was researching nanoscale magnetic materials and Multiferroics. I've also worked with experimental instruments such as UV-Vis spectroscopy, FT-IR, Raman spectroscopy, X-ray Diffraction (XRD), and Vibrating Sample Magnetometer (VSM).</p>
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## PROJECT ACTIVITY

Year	Project
2022	Solid state electrolyte



## PATENTS

Patent

## CONGRESSES AND SEMINARS

Date	Title	Place
2015	22th Iranian Seminar of on Crystallography and Mineralogy, January 2015,	Shiraz University, Shiraz, Iran

## PUBLICATIONS

Books
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Articles in reviews
NAND/AND/NOT logic gates response in series of mesoscopic quantum rings: <b>ISI journal: Modern Physics Letters B, 33, (2019) 1950431.</b>
Non-linear optical properties of nanoscale elliptical ring-shaped at the presence of Rashba spin-orbit interaction and magnetic field, <b>ISI journal: International Applied Physics A, 125.5 (2019) 346.</b>
Spin-polarized currents in a two-terminal double quantum ring driven by magnetic fields and Rashba spin-orbit interaction, <b>ISI journal: Physica E: Low-dimensional Systems and Nanostructures, 100 (2018) 7-13Factor: 3.8, 2017.</b>
Logical spin-filtering in a triangular network of quantum nanorings with a Rashba spin-orbit interaction, <b>ISI journal: Physica B: condensed matter, 529 (2018) 21-26.</b>
Enhancement of ferromagnetism in Ba and Er co-doped BiFeO <sub>3</sub> nanoparticles, <b>ISI Journal: Magnetism and magnetic material, 393, (2015) 502.</b>
Study of structural and magnetic properties of BiFeO <sub>3</sub> nanoparticles co-doped with Ba and La, <b>ISC Journal: Iranian Journal of Crystallography and Mineralogy, Vol. 24, No. 3, Fall 1395/2016.</b>
Promotion of Structural, Microstructural and Magnetic Properties of Barium and Erbium Substituted Bismuth Ferrite Nanoparticles, <b>ISC Journal: applied chemistry (semnan university), Vol 9, Issue 33, winter 2015, P. 93-102</b>

Congress proceedings
Investigation and comparison of structural, microstructural and magnetic properties of nanoparticles, <b>22th Iranian Seminar of on Crystallography and Mineralogy, January 2015, Shiraz University, Shiraz, Iran</b>



## OTHER INFORMATION


Declarations given in the present curriculum must be considered released according to art. 46 and 47 of DPR n. 445/2000.

The present curriculum does not contain confidential and legal information according to art. 4, paragraph 1, points d) and e) of D.Lgs. 30.06.2003 n. 196.

Please note that CV WILL BE PUBLISHED on the University website and It is recommended that personal and sensitive data should not be included. This template is realized to satisfy the need of publication without personal and sensitive data.

Please DO NOT SIGN this form.

Place and date: \_31/07/2023\_