

Europass Curriculum Vitae



Personal information

First name and Surname

Ali Bakouei

Address

Atomic & Molecular Physics Group, Physics Department, Faculty of Basic Sciences,
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Tehran P.O. Box 14115-175, I.R. Iran.

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a.bakouei@Modares.ac.ir , abakouei@gmail.com

Nationality

Iranian

Date of birth

21 Mar 1966

Gender

male

Education and training

Date

1999-2004

Title of qualification awarded

PhD. in Nuclear physics and elementary particles

**Name and type of organisation
providing education and training**

Faculty of Physics, Moscow state university, Moscow, Russia

PhD. Thesis

Backscattered Proton Spectrometry as a Method for Investigating Surface Layer
Modification Processes in Materials

Date

1991-1994

Title of qualification awarded

M.Sc., in Nuclear Physics

**Name and type of organisation
providing education and training**

Physics Department, Faculty of Sciences, Tehran University, Tehran, I.R. Iran

Master Thesis

Calculation of Energy Distribution in Boron Neutron Capture Therapy for Brain Tumors
using the Monte Carlo Method

Date	1985-1990																																																		
Title of qualification awarded	B.Sc., in Physics																																																		
Name and type of organisation providing education and training	Physics Department, Faculty of Sciences, Amirkabir University of Technology, Tehran, I.R. Iran																																																		
Personal skills and competences																																																			
Field of Interest	Nanotechnology – Supercapacitors –Quantum Technology- Hydrogen production battery																																																		
Social skills and competences	<i>Problem Solving, Leader,, Flexible, Team Player</i>																																																		
Mother tongue(s)	Persian (Farsi)																																																		
Other language(s)	Russian- English- Arabic																																																		
Self-assessment European level	<table><tr><th colspan="4"><i>Understanding</i></th><th colspan="4"><i>Speaking</i></th><th colspan="2"><i>Writing</i></th></tr><tr><th colspan="2"><i>Listening</i></th><th colspan="2">Reading</th><th colspan="2"><i>Spoken interaction</i></th><th colspan="2"><i>Spoken production</i></th><th colspan="2"></th></tr><tr><td>C2</td><td>Fluent</td><td>C2</td><td>Fluent</td><td>C2</td><td>Fluent</td><td>C2</td><td>Fluent</td><td>C2</td><td>Fluent</td></tr><tr><td>B2</td><td>Upper intermediate</td><td>B2</td><td>Upper intermediate</td><td>B2</td><td>Upper intermediate</td><td>B2</td><td>Upper intermediate</td><td>B2</td><td>Upper intermediate</td></tr><tr><td>B1</td><td>intermediate</td><td>B1</td><td>intermediate</td><td>B1</td><td>intermediate</td><td>B1</td><td>intermediate</td><td>B1</td><td>intermediate</td></tr></table>	<i>Understanding</i>				<i>Speaking</i>				<i>Writing</i>		<i>Listening</i>		Reading		<i>Spoken interaction</i>		<i>Spoken production</i>				C2	Fluent	C2	Fluent	C2	Fluent	C2	Fluent	C2	Fluent	B2	Upper intermediate	B2	Upper intermediate	B2	Upper intermediate	B2	Upper intermediate	B2	Upper intermediate	B1	intermediate	B1	intermediate	B1	intermediate	B1	intermediate	B1	intermediate
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C2	Fluent	C2	Fluent	C2	Fluent	C2	Fluent	C2	Fluent																																										
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Russian																																																			
English																																																			
Arabic																																																			
Executive Records	<p>Head of Physics Department, Islamic Azad University, Nur Branch, 1994-1995</p> <p>Vice Dean for Education and Research, Faculty of Science, University of Mohaghegh Ardabili (~3 years), 2004-2006</p> <p>Member of the University Educational Council, University of Mohaghegh Ardabili, 2004-2006.</p> <p>Member of the University Graduate Studies Council, University of Mohaghegh Ardabili, 2004-2005.</p> <p>Member of the University Evaluation and Monitoring Council, University of Mohaghegh Ardabili, 2004-2005</p> <p>Member of the University Disciplinary Appeals Committee, University of Mohaghegh Ardabili, 2004-2005</p> <p>Scientific Deputy and Supervisor of Iranian Students in Russia, Belarus, and Central Asia, 2007-2010</p> <p>Scientific Deputy and Supervisor of Iranian Students in Belarus and Ukraine, 2010-2014</p>																																																		

Faculty Member, Tarbiat Modares University, 2012 - Present

Head of Atomic and Molecular Physics Department, Tarbiat Modares University, 2015 - Present

Chairman of Physics Department, Tarbiat Modares University, 2015 - Present

Dean of Tarbiat Modares University Campus 2021-present

Educational records

Lecturer, Islamic Azad University, Qom Branch, 1992-1998

Full-time Professor, Islamic Azad University, Nowshahr-Chalus Branch, 1995

Full-time Professor, Islamic Azad University, Nur Branch, 1996-1999

Faculty Member, University of Mohaghegh Ardabili, 2004-2012

Faculty Member, Tarbiat Modares University, 2012 - Present

Teaching a wide range of undergraduate and graduate courses in Physics and Nuclear Specialization and Advanced Quantum

Other Scientific-Executive Activities

Executive Secretary of the International Conference "Agriculture and Natural Resources of Iran and Russia," St. Petersburg, Russia 2009

Scientific Committee Member, International Conference "Novel Applications of Nanotechnology," Minsk, April 2012

Executive Secretary, 1st International Conference "Novel Applications of Nanotechnology," Minsk, April 2012

Executive Secretary, 2nd International Conference "Novel Applications of Nanotechnology," Minsk, May 2015

Scientific Committee Member, International Conference "Actual Problems of Solid State Physics," Minsk, 2016

Member of the International Association of Alumni of Russian Universities in Belarus

Award: The only Iranian recipient of the High Medal of the National Academy of Sciences of Belarus

Research Activities

Books (Author/Translator)

Author of a five-volume series: "Introduction to the Education System of the Russian Federation"

Author: "Nuclear Energy: What Everyone Should Know," Elias Publications, Tehran, 2009.

Co-author: "Dictionary of New Persian-Russian Words," Rodomino Publications, Moscow, 2010

Translator (from English): "Fundamentals of Nuclear Reactors" (Ready for Publication)

Translator (from Russian): "Nanotechnology for Everyone" (Ready for Publication)

Papers

Application of proton NBS spectrometry for definition of stoichiometry of two-component compounds

Investigation of erosion treatment of heat-resistant nickel alloys by ion scattering spectrometry and X-ray analysis

Study of Fe and Ti thermodiffusion nitriding by proton nuclear backscattering spectrometry and X-ray analysis

Study of thermal diffusion nitriding of titanium using methods of NBS proton spectrometry and X-ray diffraction analysis

Measurement of thickness and electro-physical parameters of dielectric and metallic thin films by optical and microwave methods

Physical Properties of Hot Wall Deposited $\text{Sn}_{1-x}\text{Pb}_x\text{S}$ Thin Films

Flexible $\text{Cu}(\text{In,Ga})\text{Se}_2$ Solar Cells with In_2S_3 Buffer Layer

Hollow Nanostructured Copper Cobalt Spinel Microspheres as an Advanced Material for Supercapacitors

Self-templated synthesis of uniform nanoporous CuCo_2O_4 double-shelled hollow microspheres for high-performance asymmetric supercapacitors (Published in *ChemComm*)

The study of electric erosion treatments of Ni-superalloys by ion-scattering spectrometry and X-ray analysis

Using the method of NBS proton spectrometry to study iron nitriding initial stage

STUDY OF TiN COATINGS BY THE METHODS OF RUTHERFORD AND NUCLEAR BACKSCATTERING

Study of FeN Coating by the Methods of Rutherford and Nuclear Proton Backscattering

Measurement of the parameters of nanometer films by optical and microwave methods

SnS-PbS Nanorod for Thermoelectric Application

Investigation of photoelectrochemical properties of WO_3 thin films for photoelectrochemical water splitting application

Hydrothermal synthesis of hematite nanostructures for photoelectrochemical water splitting

Synthesis and electrochemical supercapacitive performance of copper cobalt spinel hollow spheres

Investigation of the structure and chemical properties of titanium nitride coatings using methods of backscattered proton nuclear spectroscopy and X-rays

Investigation of nitrogen distribution in iron nitride coatings using backscattered proton nuclear spectrometry

Research Projects

Synthesis of ZnO semiconductor nanoparticles via sol-gel method and investigation of their optical and structural properties
multilayered film electromagnetic screens in space equipment
Investigation of the effect of thermal modification on the photoelectrochemical performance of hydrothermally grown iron oxide (hematite) nanorods

Measurement of radioactivity in potato crops in Ardabil city
Preparation of ZnO thin films by sol-gel methods and investigation of their optical properties
Simultaneous measurement of the thickness of two nanolayers on insulating materials.
Measurement of soil moisture using electromagnetic waves
Feasibility study for the design and construction of an electron induction accelerator.

Other

Research activities at Saratov State University, Russia

Student Projects

Experimental investigation of single-photon generation capability in boron nitride thin films
Effect of defect on performance of perovskite based light emitting diodes
Experimental characterization of turbulent optical parameters
Investigation of Halogen role in the halide perovskite structure and its effect on perovskite solar cell photovoltaic parameters
Preparation of nanostructure thin film and investigation of the effect of the effect of titanium doped on its optical properties
Simulation and Optimization of Alkaline Water Electrolysis Performance Using Carbon-Based Nanofluids
Irradiation of silicone elastomer surface using laser and checking the physical properties of the surface and cell adhesion to it

Random Raman laser of Rhodamine 6 G with morphology effect of ZnO microstructures

ITO nanostructure thin film by sol-gel method for optical modulator

The Investigation of Quantum Coherency and behavior in Quantum Phase Transition

Investigation of photocatalytic properties of WO₃ inverse opal nanostructures on graphene for photoelectrochemical water splitting.

Fabrication and characterization of anode electrode based on Ni-Fe nanostructures enhanced with metal additives to split water and produce hydrogen

Theoretical calculations the effects of local surface plasmon resonance of noble metals according to the addition of TiO₂ for photocatalyst production

Study and investigation of the propagation of Laguerre-Gaussian laser beams in turbulent atmospheres

Nano composite Synthesis based on Graphene Oxide for supercapacitor electrode Fabrication

The effect of graphene deposition on hematite (α -Fe₂O₃) for efficient photoelectrochemical water splitting

Investigating the role of halogen change in halide perovskite structure and its effect on perovskite solar cell parameters