

Curriculum Vitae

Vahid Zanganeh
(Ph.D)

1 Biographical Data

Date of Birth: 9/5/1981

Place of Birth: Gorgan, Iran

Marital Status: Married

Gender: Male

Nationality :Iranian

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2 Education

*** Ph.D : Nuclear Physics.

From: Department of Physics, Faculty of Basic Sciences, Mazandaran university, Babolsar, Iran

Date: 2008-2012

Supervisor: Dr. Omid Naser Ghodsi

Advisors: Dr. Mohammad Mahdavi

*** M.Sc : Nuclear physic, Muon Cycle Dynamics In Multi-Layer Solid Hydrogen Isotopes

From: Department of Physics, Faculty of Basic Sciences, Mazandaran university, Babolsar, Iran

Date: 2005-2007

Supervisor: Dr. Mohammad Mahdavi

Advisors: Dr. Omid Naser Ghodsi

*** B.Sc : Applied Physics

From: Shahrood university of technology, Shahrood, Iran.

Date: 2000-2005

3 Research Positions

Sabbatical leave researcher, Department of Physics, Guangxi Normal University Guilin, China.

4 Publications in International Journals

* V. Zanganeh, A.M. Izadpanah, and A. Sadeghloo, ” The rule of surface energy coefficient between nuclei in the simultaneous study of fusion and quasi-elastic reactions”, Annals of Physics, (under review) (2025)

* H Karami, V. Zanganeh, M Ahmadi, Effect of B₂O₃/Bi₂O₃ on radia-

tion shielding parameters of mobile phone waste glasses (under review (2025))

* A Almasi, SY Mousavi, ON Ghodsi, V. Zanganeh, Technical performance and gamma-ray shielding of geopolymer mortar containing copper slag: effects of NaOH concentration and Na₂SiO₃/NaOH ratio Multiscale and Multidisciplinary Modeling, Experiments and Design 8 (10), 1-21(2025)

* M Ahmadi, V. Zanganeh, MI Sayyed, H Karami, SS Hosseini Effect of Bi₂O₃ on the mechanical, physical and radiation shielding properties of SiO₂-B₂O₃-ZnO-Al₂O₃ glasses Optical and Quantum Electronics 56 (10), 1623 (2024)

* E Abdi, V. Zanganeh, SA Seyyedi, M Ahmadi , Effect of melting time and temperature on radiation shielding and mechanical parameters of barium borate glass Optical and Quantum Electronics 56 (9), 1455(2024)

* M Ahmadi, SM Motevalli, P Taherparvar, V. Zanganeh, Calculation of Involved and Noninvolved Organs Doses in Carbon Therapy of Brain Tumor Using GEANT4 Simulation Toolkit. Iranian Journal of Medical Physics/Majallah-I Fzk-I Pizishk-i rn 21 (5)(2024)

* D Naderi, M Ahmadi, V. Zanganeh, Effect of rare-earth oxide (Eu₂O₃) on the physical, mechanical, acoustic and radiation shielding properties of the CaO-Gd₂O₃SiO₂B₂O₃ glasses Applied Radiation and Isotopes 208, 111309 (2024)

* M Ahmadi, Z Vahid, N Darush, Investigated mechanical, physical parameters and Gamma-Neutron radiation shielding of the rare earth (Er₂O₃/CeO₂) doped barium borate glass: Role of the melting time and Radiation Physics and Chemistry 217, 111450(2024)

* AM Izadpanah, V. Zanganeh, Z Jafarpour, Estimation of Nuclear Temperature During Fusion Interactions: A Dynamic Approach, Acta Physica Polonica B 55 (8), 1 (2024)

* SM Motevalli, V. Zanganeh, S Bagheri, Studying the abundance of heavy nuclei produced in carbon therapy using Geant4 toolkit Journal of Nuclear Science, Engineering and Technology (JONSAT) 44 (3), 159-164 (2023)

* KP Santhosh, DT Akrawy, TA Jose, AH Ahmed, H Hassanabadi, ... A systematic study of α -decay half-lives for Ac, Th, Pa, U and Np isotopes with

A = 205245 using the modified generalized liquid drop model International Journal of Modern Physics E 32 (09), 2350047(2023)

* M Asri, M Ahmadi, V. Zanganeh, CuO-doping effect on the optical properties (linear/linear terrace) and mechanical and acoustic features of lead borate glasses Journal of Materials Science: Materials in Electronics 34 (26), 1820(2023)

* M Asri, M Ahmadi, V. Zanganeh, Study of optical properties and comprehensive shielding behaviors for neutron and gamma-ray of $60\text{Bi}_2\text{O}_3\text{-(40-x)B}_2\text{O}_3\text{-xBaO}$ glass system Results in Physics 52, 106824(2023)

* M. Yousefi, R. Boodaghi, I. Akkurt, M. Ahmadi, V.Zanganeh, " Physical, optical, mechanical, and radiation shielding properties for the $\text{B}_2\text{O}_3\text{Li}_2\text{O}$ glasses", Radiation Physics and Chemistry 209,110962 (2023)

* M. Ahmadi, V. Zanganeh, S. Bagheri, and H. Karami, " Effect of substitution of Zirconium dioxide by Tin (IV) oxide on radiation shielding and properties of used in therapeutic environments", Optik 278,170538 (2023)

* H.Karami, V. Zanganeh ,M. Ahmadi, " Study Nuclear Radiation Shielding, Mechanical and Acoustical Properties of $\text{TeO}_2\text{-Na}_2\text{O-BaO-TiO}_2$ Alloyed Glasses", Radiation Physics and Chemistry 208,110917(2023)

* M. Ahmadi, V. Zanganeh ,M. I. Sayed,H.Karami, S.S. Hoseini, " Effect of Bi_2O_3 on the Radiation shielding, physical, and mechanical properties of $\text{Bi}_2\text{O}_3\text{-SiO}_2\text{-B}_2\text{O}_3\text{-ZnO-Al}_2\text{O}_3$ Glasses using MCNP and Phy-X PSD software ", Radiation Physics and Chemistry, (under review) (2022)

* V Zanganeh, s.s.hoseini, A.M.Izadpanah, "Influence of deformation on alpha decay Half-lives of ^{219}Th Isotopes", Nuclear Physics A 1029,122561 (2023)

* M. Ahmadi, S.M. Motevalli, P. Taherparvar, V. Zanganeh, "Calculation of Involved and Noninvolved Organs Doses in Carbon Therapy of Brain Tumor Using Geant4. ", Radiation Physics and Chemistry (under review) (2023)

- * M. Ahmadi, V. Zanganeh, H.Karami, M. I. Sayed, "Gamma radiation attenuation characteristics, acoustic and mechanical properties of TeO₂/TiO₂/B₂O₃ glasses using Monte carlo code and Phy-X/PSD software", OPTIK 270, 169911(2022)

- * V.Zanganeh , S. Mohammad Motavali , S. Bagheri, "Studying the abundance of heavy nuclei produced in carbon therapy using Geant4 toolkit", Journal of Nuclear Science and Technology (JonSat), 10.24200/nst.2022.1127.1744 (2022)

- * V Zanganeh,"Effect of WO₃ addition on mechanical, structural, optical, and radiation shielding properties of lead boro phosphate glasses system using Monte Carlo simulation ", Optik 269, 169900(2022)

- * M. Ahmadi, V. Zanganeh, R.Boodaghi , I.Akkurt , "Improvement of the Radiation, Physical, Mechanical, and Acoustic Properties of the BaO-B₂O₃-Bi₂O₃ Glass System", Physica Scripta 97, 105309 (2022)

- * V Zanganeh, R Khabaz, F Aghili ,"Investigation the trend of different magnetic fields types on linac photon beam mode by Monte Carlo method using Geant4 toolkit", Radiation Physics and Chemistry, 109603 (2021)

- * V Zanganeh, A Izadpanah, M Ahmadi,"Study of neutron-rich nuclei reaction using ImQMD model", Iranian Journal of Physics Research 20 (4), 569-577 (2021)

- * AM Izadpanah, SS Hosseini, V Zanganeh,"Theoretical cluster decay predictions for the nuclei Md with different nuclear potentials",International Journal of Modern Physics E 29 (12), 2050095 (2020)

- * V Zanganah, DT Akrawy, H Hassanabadi, SS Hosseini, S Thakur, "Calculation of -decay and cluster half-lives for ¹⁹⁷226Fr using temperature-dependent proximity potential model", Nuclear Physics A 997, 121714, (2020)

- * R. Boodaghi malidarre, R. Khabaz, M. R. Benam, and V.Zanganeh, "A feasibility study to reduce the contamination of photoneutrons and photons in organs/tissues during radiotherapy"Iranian Journal of Medical Physics 17

(6), 366-373 (2020)

* V Zanganeh, R Gharaei, AM Izadpanah, "omparative study for different nuclear proximity potentials applied to quasi-elastic scattering and fusion reactions", Nuclear Physics A 992, 121637 (2019)

* R Gharaei, A Hadikhani, V Zanganeh," An explanation for the anomaly problem of diffuseness parameter of the nucleus-nucleus potential in heavy-ion fusion reactions: A possible thermal solution", Nuclear Physics A 990, 47-63 (2019)

* F Sabery Balajaddeh, M Golshanian, V Zanganeh," Optimum neutron energy simulation in treatment of head and neck cancer at different depths in the BNCT method", Iranian Journal of Medical Physics 15 (Special Issue-12th. Iranian Congress (2018)

* R. Gharaei, Vahid Zanganeh and N. Wang ,"Systematic study of proximity potentials for heavy-ion fusion cross sections" ,Nucl. Phys. A -NPA-D-18-00158 (2018).

* Rahim Khabaz , Roya Boodaghi , Mohammad Reza Benam and Vahid Zanganeh ,"Estimation of photoneutron dosimetric characteristics in tissues/organs using an improved simple model of linac head" ,Applied Radiation and Isotopes 133, 8894 (2018).

* V. Zanganeh, R. Gharaei, and N. Wang, Dynamical explanation for the anomaly in the diffuseness parameter of the nucleus-nucleus potential in heavy-ion fusion reactions, Phys. Rev. C 95, 034620 (2017).

* R. Gharaei, V. Zanganeh, Temperature-dependent potential in cluster-decay process, Nucl. Phys. A 952, 28-40 (2016).

* V. Zanganeh, M. Mirzaei, N. Wang, The analytical parametrization of fusion barrier by using the skyrme energy-density function model , Commu. Theo. Phys. 64, No. 2, 177-184 (2015).

* V. Zanganeh, N. Wang, Temperature-dependent potential in alpha-decay process, Nucl. Phys. A 929, 94 (2014).

* M. Golshanian, O. N. Ghodsi, R. Gharaei, V. Zanganeh, The Analysis of the Fusion Reaction of Two Colliding Nuclei Using the FCC Lattice Model CHIN.PHYS.LETT. Vol. 30, No. 10, 102502(2013).

* V. Zanganeh, N. Wang and O. N. Ghodsi, Dynamical nucleus-nucleus potential and incompressibility of nuclear matter, Phys. Rev. C 85, 034601 (2012).

* O.N. Ghodsi and V. Zanganeh, The effect of the nuclear state equation on the surface diffuseness parameter of the Woods Saxon potential in the heavy ion fusion reactions, Nucl. Phys. A 846, 40-50 (2010) .

* O.N. Ghodsi and V. Zanganeh, Calculation of the total potential between two deformed heavy ion nuclei using the Monte Carlo method and M3Y nucleon-nucleon forces, Phys. Rev. C 79, 044604 (2009).

* M. Mahdavi and V. Zanganeh, Muon Cycle Dynamics in Multi-Layer Solid Hydrogen Isotopes, CHINESE JOURNAL OF PHYSICS VOL. 46 , NO. 3 (2008).

* M. Mahdavi and V. Zanganeh, Effects of internal ^3He breeding on Muon cycle in Tritium target, Far East J. Dynamical systems 9(1),125-131 (2007).

5 Refereed Conferences and Seminar Presentations

[36] V. Zanganeh, M. Asri, A. Tajik, F. Ebrahimi, Annual Physics Conference of Iranian, Yazd, Iran, Aug. 28-30,2017.

[35] F. Aghili, M. T. Batyar, S. Sarshad, V. Zanganeh and R. Khabaz, Annual Physics Conference of Iranian, Yazd, Iran, Aug. 28-30,2017.

- [34] S. Sarshad, M. T. Batyar, F. Aghili, V. Zanganeh and R. Khabaz, Annual Physics Conference of Iranian, Yazd, Iran, Aug. 28-30, 2017.
- [33] M. Mirzaei, J. Mirzaei, V. Zanganeh, The National Conference on physics, Shiraz, Iran, May, 10-11, 2017.
- [32] M. Mirzaei, J. Mirzaei, V. Zanganeh, A. M. Izadpanah, The National Conference on physics, Shiraz, Iran, May, 10-11, 2017.
- [31] M. Mirzaei, J. Mirzaei, A. M. Izadpanah, V. Zanganeh. The National Conference on physics, Shiraz, Iran, May, 10-11, 2017.
- [30] S. Sarshad, M. T. Batyar, F. Aghili, V. Zanganeh and R. Khabaz, Iranian annual Nuclear physics conference, Tehran, Iran, Feb. 22-23, 2017.
- [29] V. Zanganeh, A. M. Izadpanah and M. Ahmadi, Iranian annual Nuclear physics conference, Tehran, Iran, Feb. 22-23, 2017.
- [28] M. Kohsarian, A. M. Izadpanah and V. Zanganeh, Iranian annual Nuclear physics conference, Tehran, Iran, Feb. 22-23, 2017.
- [27] V. Zanganeh, A. M. Izadpanah and M. Ahmadi, Annual Physics Conference of Iranian, Shiraz, Iran, Aug. 22-25, 2016.
- [26] V. Zanganeh, F. Ebrahimi and A. Tajik, Annual Physics Conference of Iranian, Shiraz, Iran, Aug. 22-25, 2016.
- [25] V. Zanganeh, M. Mirzaei, F. Ebrahimi and A. Tajik, Annual Physics Conference of Iranian, Shiraz, Iran, Aug. 22-25, 2016.
- [24] V. Zanganeh, F. Ebrahimi and A. Tajik, 1st National Conference on Physics Islamic Azad University, Tabriz, Iran, July 20, 2016.
- [23] V. Zanganeh, M. Mirzaei, F. Ebrahimi and A. Tajik, 1st National Conference on Physics Islamic Azad University, Tabriz, Iran, July 20, 2016.

- [22] V. Zanganeh, A. M. Izadpanah, M. Ahmadi, Iranian annual Nuclear physics conference, Yazd, Iran, Feb. 24, 2016.
- [21] V. Zanganeh, J. Mirzaei, M. Mirzaei, Iranian annual physics conference, Mashhad, Iran, Aug. 24, 2015.
- [20] T. Koohrokhi, V. Zanganeh, R. Ghazagh, Iranian annual physics conference, Mashhad, Iran, Aug. 24, 2015.
- [19] A. M. Izadpanah, V. Zanganeh, S. Rahmanimanesh, Iranian annual Nuclear physics conference, Rasht, Iran, Feb. 26-27, 2014.
- [18] V. Zanganeh, A. M. Izadpanah, M. Zahedi, S. Rahmanimanesh, M. Ahmadi, Iranian annual Nuclear physics conference, Rasht, Iran, Feb. 26-27, 2014.
- [17] A. M. Izadpanah, V. Zanganeh, M. Mirzaei, F. Yaghobi, Iranian annual Nuclear physics conference, Rasht, Iran, Feb. 26-27, 2014.
- [16] V. Zanganeh, A. M. Izadpanah, M. Mirzaei, Iranian annual Nuclear physics conference, Rasht, Iran, Feb. 26-27, 2014.
- [15] V. Zanganeh, O.N. Ghodsi and R. Gharaei, Iranian annual physics conference, Birjand, Iran, Aug. 26-29, 2013.
- [14] O. N. Ghodsi, S. Mirzajani, V. Zanganeh, Iranian annual physics conference, Birjand, Iran, Aug. 26-29, 2013.
- [13] V. Zanganeh, A. M. Izadpanah, Iranian annual physics conference, Birjand, Iran, Aug. 26-29, 2013.
- [12] V. Zanganeh, O. N. Ghodsi and R. Gharaei, Iranian annual Nuclear physics conference, Mashhad, Iran, Feb. 20-21, 2013.
- [11] O. N. Ghodsi, M. Golshanian and V. Zanganeh, Iranian annual Nuclear physics conference, Mashhad, Iran, Feb. 20-21, 2013.

- [10] R. Gharaei, O. N. Ghodsi and V. Zanganeh, Iranian annual Nuclear physics conference, Mashhad, Iran, Feb. 20-21, 2013.
- [9] V. Zanganeh and O. N. Ghodsi, Iranian annual physics conference, Yazd, Iran, Aug. 27-30, 2012.
- [8] V.Zanganeh and O.N. Ghodsi, M. Golshanian, Iranian annual physics conference, Oromie, Iran, Sep. 4-8, 2011
- [7] V.Zanganeh and O.N. Ghodsi, Iranian annual physics conference, Oromie, Iran, Sep. 4-8, 2011
- [6] V.Zanganeh and O.N. Ghodsi, M. Golshanian, Iranian annual Nuclear physics conference, Isfahan, Iran, may 15-19, 2011
- [5] V.Zanganeh and O.N. Ghodsi, Iranian annual Nuclear physics conference, Isfahan, Iran, may 15-19, 2011
- [4] V.Zanganeh and O.N. Ghodsi, Iranian annual physics conference, Hamedan, Iran, Aug 28-30, 2010
- [3] V.Zanganeh and O.N. Ghodsi, Iranian annual physics conference, Isfahan, Iran, Aug 4-7, 2009
- [2] V.Zanganeh and O.N. Ghodsi, Iranian annual physics conference, Kashan, Iran, Sep 10-13, 2008
- [1] V.Zanganeh and M. Mahdavi, Iranian annual Nuclear physics conference, Isfahan, Iran, March 6-7, 2006

6 Student Supervisions

- [1] Mrs. R. Boodaghi(Phd.)
- [2] Mrs. M. Ahmadi (phd)

- [3] Mr J. Mirzaei (M.Sc.)
- [4] Mrs F. Ebrahimi Kalokan (M. Sc.)
- [5] Mrs M. Tajik(M.Sc.)
- [6] Mrs F. Ghazagh (M.Sc.)
- [7] Mrs. K. Bagheri (M.Sc.)
- [8] Mrs. S. F. Aghili (M.Sc.)
- [9] Mrs. S. Sarshad (M. Sc.)
- [10] Mrs. M. Kohsarian(M.Sc.)
- [11] Mrs. A. Sadeghlo(M.Sc)
- [12] Mrs. F. Moradi(M.Sc)
- [13] Mrs. F. Saberi(M.Sc)
- [14]Mr M. Mirzaei (M.Sc.)
- [15] Mrs S. Rahmani manesh (M.Sc.)
- [16] Mrs. S. Bagheri (M.Sc)
- [17] Mrs. F. Mahmoodi(M.Sc)
- [18] Mr. S. Adeli (M.Sc)
- [19] Mrs. Z. Jafarpour(M.Sc.)
- [20] Mr. M. Atabai(M.Sc.)
- [21] Mrs. A. Niazi(M.Sc.)
- [22] Mr. B. Kohi(M.Sc.)
- [23] Mr. H. Bazrafshan(M.Sc.)
- [24] Mrs. G. Mohammad Arazi(M.Sc.)
- [25] Mrs.A. Amini(M.Sc.)
- [26] Mrs. H. Hasanzadeh(M.Sc.)
- [27] Mrs.F. Bafandeh (M.Sc.)
- [28] Mrs. F. erfanian (M.Sc.)
- [29] Mrs. N. Saidi(M.Sc.)
- [30] Mrs.T. Rajabloo (M.Sc.)
- [31] Mrs. M. Mohseni(M.Sc.)

7 Teaching Experiences

Quantum Mechanics

Analytical Mechanics

laboratory of Fundamental of Physics I

Fundamental of Physics I , II, III and IV

Nuclear Physics I and II
Advance Nuclear Physics I and II
Elementary Physics A (2009)
Computer Applications in Physics,
Advance Computational Physics,
Electricity and Magnetism I and II,
Thermodynamic
statistical mechanic
Radioisotopes and Their applications.
Modern Physics.
Math in physics I and II.

8 Computer expertise

- [1] Fortran.
- [2] Maple.
- [3] bash programming in Linux.
- [4] C++
- [5] Root.
- [6] Geant4.
- [7] Gnuplot.
- [8] MCNP (basic)
- 9] Matlab (basic)
- [10] COMSOL Multiphysics (basic).

9 Research Interests

Theoretical and Computational heavy ion fusion reaction with static and dynamic approaches, Radiation therapy, Medical Physic, Simulation computer. Simulation of Accelerator,

10 Reference

Prof. Dr. Ning Wang

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