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Education

- ✓ B.Sc, Solid State Physics, Yasuj Univercity - 2005
- ✓ MS, Physics, Shiraz University - 2008
- ✓ PhD, Nuclear Physics, Shiraz University - 2013

Courses

- | | |
|--------------------------------------|-----------------------------------|
| 1. Special Topics of Nuclear Physics | 2. Basic Physics 2 and Laboratory |
| 3. Physics 1 | 4. Physics Laboratory 1 |
| 5. Nuclear Structure | 6. Physics 2 |
| 7. Advanced Nuclear Physics | 8. Advanced Nuclear Physics 1 |
| 9. Nuclear Physics1 | 10. Basic Physics 2 |
| 11. General Physics 1 | 12. Nuclear and Particle Physics |
| 13. Basic Physics 1 and Laboratory | 14. General Physics4 |

Thesis

Master Thesis

1. Investigation of the fusion reactions using the semi-classical coupled channels model

علي اكبر ناصري, [Vahid Dehghani, Seyed Alireza Alavi]

نیمسال دوم سال تحصیلی 97-98

2. Fusion cross section of deformed nuclei by using expansion of the nuclear potential

مسعود حیدرپور, [Seyed Alireza Alavi, Vahid Dehghani]

نیمسال دوم سال تحصیلی 97-98

3. Heavy ion fusion reactions: Coupled-channels formalism

مرتضی کریمیان, [Seyed Alireza Alavi, Vahid Dehghani]

نیمسال اول سال تحصیلی 97-98

4. Temperature dependent nuclear potentials in nuclear fusion and decay

فریبا قربانی, [Seyed Alireza Alavi, Vahid Dehghani, Sareh Dadfar, Ali Akbar Mehman Doost Khajeh Dad, Mahboobe Sayahi]

نیمسال اول سال تحصیلی 97-98

5. Study of pp scattering in the inelastic region in generalized linear sigma model

حمیدرضا صادقی, [Ali Akbar Mehman Doost Khajeh Dad, Soodeh Zarepour, Vahid Dehghani, Mahboobe Sayahi, Seyed Alireza Alavi]

نیمسال اول سال تحصیلی 96-97

6. Study of the fusion reactions of heavy ions with even-even deformed targets by using double-folding potential

مصطفی رضایی کهن, [Seyed Alireza Alavi, Vahid Dehghani]

نیمسال اول سال تحصیلی 96-97

7. Evaluating the Isotopic and Natural Radioactivity of Thermal and cold Water Springs in the Bazman Area , Southeast of iran

داود بهادری, [Reza Jahanshahi, Vahid Dehghani, Sepide Mali]

نیمسال دوم سال تحصیلی 95-96

8. The relationship between the potential well and ortho-positronium lifetime in the spherical and ellipsoidal nano-cavities in the RTE model

مهديه شهرکي اصیل, [Ali Akbar Mehman Doost Khajeh Dad, Vahid Dehghani, Morteza Khaghani]

نیمسال اول سال تحصیلی 93-94

Journals Papers

2024

1. محاسبه کمیت های ترمودینامیکی هسته با استفاده از پارامتر چگالی تراز وابسته به دما

Khosrow Benam, Seyed Zeynab Musavi, Vahid Dehghani, Seyed Alireza Alavi

Volume: (44) 12 - 19

2023

2. Alpha decay investigations of Bi isotopes

F. Koyuncu, A. Soylu, Seyed Alireza Alavi, Vahid Dehghani, G. Koçak

INDIAN JOURNAL OF PHYSICS Volume: (97) 1209 - 1216

3. Thermal properties of ^{97}Mo and ^{90}Y nuclei using temperature dependent level density parameter

Kh. Benam, Vahid Dehghani, Seyed Alireza Alavi

EUROPEAN PHYSICAL JOURNAL A Volume: (59) 221-1 - 221-8

2022

4. Thermal properties of nuclei using RMF theory with average value gap parameter

, Ali Akbar Mehman Doost Khajeh Dad, Vahid Dehghani

NUCLEAR PHYSICS A Volume: (1017) 122353-1 - 122353-17

5. Cluster decay half-lives using asymmetry dependent densities

Vahid Dehghani, Seyed Alireza Alavi, R. Razavi, A. Soylu, F. Koyuncu

Chinese Physics C Volume: (46) 044104-1 - 044104-10

6. Calculations on the proton decay with modified preformation probability

A. Soylu, F. koyuncu, Seyed Alireza Alavi, Vahid Dehghani

INTERNATIONAL JOURNAL OF MODERN PHYSICS E-NUCLEAR PHYSICS Volume: (31) 2250062-1 - 2250062-10

7. Alpha decay half-lives of even-even nuclei using alpha-folding interaction

Fariba Ghorbani, Seyed Alireza Alavi, Vahid Dehghani

EUROPEAN PHYSICAL JOURNAL A Volume: (58) 12-1 - 12-14

2021

8. Alpha decay half lives of spherical even-even nuclei: Role of repulsive core

Fariba Ghorbani, Seyed Alireza Alavi, Vahid Dehghani

NUCLEAR PHYSICS A Volume: (1006) 122111-1 - 122111-11

9. Systematic of alpha decay half-lives: role of quantization condition

Mahla Hoseini tabatabai, Seyed Alireza Alavi, Vahid Dehghani

CANADIAN JOURNAL OF PHYSICS Volume: (99) 24 - 32

10. Proton radioactivity half-lives with nuclear asymmetry factor

A. Soylu, F. Koyuncu, G. Gangopadhyay, Vahid Dehghani, Seyed Alireza Alavi

Chinese Physics C Volume: (45) 044108-1 - 044108-9

11. Application of the residual surface delta interaction in the β^+ decay of $(_{-}^{40})\text{Sc}$ nucleus

Aref Yarahmadi, Vahid Dehghani, Seyed Alireza Alavi

Iranian Journal of Physics Research Volume: (20) 667 - 679

2020

12. Temperature dependence of the alpha decay half-lives of even-even Th isotopes

Fariba Ghorbani, Seyed Alireza Alavi, Vahid Dehghani

NUCLEAR PHYSICS A Volume: (1002) 121947-1 - 121947-12

13. β^+/EC transitions of ^{40}Sc using Tamm-Dancoff approximation

Aref Yarahmadi, Seyed Alireza Alavi, Vahid Dehghani

CHINESE JOURNAL OF PHYSICS Volume: (66) 406 - 414

14. Heavy ion fusion reaction cross section: Analysis of the temperature dependence of the repulsive nuclear potential

Fariba Ghorbani, Seyed Alireza Alavi, Vahid Dehghani, A. Soylu, F. Koyuncu

PHYSICAL REVIEW C Volume: (102) 014610-1 - 014610-6

15. Proton-radioactivity Half-life Formulas with Isospin and Shell Effects

A. Soylu, F. Koyuncu, Seyed Alireza Alavi, Vahid Dehghani

ACTA PHYSICA POLONICA B Volume: (51) 2125 - 2138

2019

16. Alpha and cluster decay of some deformed heavy and superheavy nuclei

Najmeh Maroofibabaki, Vahid Dehghani, Seyed Alireza Alavi

NUCLEAR PHYSICS A Volume: (983) 77 - 89

17. Prediction of Alpha Decay Half-Lives of $Z = 118-121$ Superheavy Nuclei with $A \geq 300$ by Using the Double-Folding Potential

Mahboobe Sayahi, Vahid Dehghani, D. Naderi, Seyed Alireza Alavi

ZEITSCHRIFT FUR NATURFORSCHUNG SECTION A-A JOURNAL OF PHYSICAL SCIENCES Volume: (74) 551 - 560

18. Role of magic numbers in thermodynamic quantities of ^{206}Pb and ^{138}Ba using BCS and Lipkin-Nogami models

Kh. Benam, Vahid Dehghani, Seyed Alireza Alavi

EUROPEAN PHYSICAL JOURNAL A Volume: (55) 1 - 14

19. CLUSTER DECAY HALF-LIFE WITH DOUBLE-FOLDING POTENTIAL: UNCERTAINTY ANALYSIS

Najmeh Maroofibabaki, Vahid Dehghani, Seyed Alireza Alavi

ACTA PHYSICA POLONICA B Volume: (50) 1349 - 1358

20. Variations of stable oxygen and hydrogen isotope ratios in the cold and thermal springs of the Bazman volcanic area (in the southeast of Iran)

, Reza Jahanshahi, Vahid Dehghani, Sepideh Mali

Environmental Earth Sciences Volume: (78) 663-1 - 663-13

21. Mass-split dependence of pre-scission neutron multiplicity by four-dimensional Langevin dynamics in $^{16,18}\text{O}$, ^{40}Ar and ^{64}Ni -induced fusion-fission reactions

D. Naderi, Seyed Alireza Alavi, Vahid Dehghani

INTERNATIONAL JOURNAL OF MODERN PHYSICS E-NUCLEAR PHYSICS Volume: (28) 1950077-1 - 1950077-16

22. Study of Single Particle Energy Levels by Using Woods-Saxon Potential and its Approximate Solution in Harmonic Oscillator Basis

Naeeme Rahimiyan, Seyed Alireza Alavi, Vahid Dehghani

Volume: (9) 75 - 87

2018

23. Calculation of proton radioactivity half-lives

Seyed Alireza Alavi, Vahid Dehghani, Mahboobe Sayahi

NUCLEAR PHYSICS A Volume: (977) 49 - 59

24. Thermal properties of $^{96,97}\text{Mo}$ using Lipkin-Nogami model with an average value gap parameter

Kh. Benam, Vahid Dehghani, Gh. Forozani

INTERNATIONAL JOURNAL OF MODERN PHYSICS E-NUCLEAR PHYSICS Volume: (27) 1850045 - 1850045

25. Role of constant value of surface diffuseness in alpha decay half-lives of superheavy nuclei

Vahid Dehghani, Seyed Alireza Alavi, Kh. Benam

MODERN PHYSICS LETTERS A Volume: (33) 1850080-1 - 1850080-10

26. Empirical formulas for proton decay half-lives: Role of nuclear deformation and Q -value

Vahid Dehghani, Seyed Alireza Alavi

Chinese Physics C Volume: (42) 104101-1 - 104101-10

2017

27. Influence of deformed surface diffuseness on alpha decay half-lives of actinides and lanthanides

, Seyed Alireza Alavi, Vahid Dehghani

NUCLEAR PHYSICS A Volume: (963) 68 - 77

28. Calculating the thermal properties of 93,94,95Mo using the BCS model with an average value gap parameter

Vahid Dehghani, ,

Nuclear Science and Techniques Volume: (28) 128 - 128

29. The Effect of Curing Light Intensity of Free Volume Size in Some Dental Composites

, Ali Akbar Mehman Doost Khajeh Dad, Vahid Dehghani, ,

Polimery w medycynie Volume: (46) 129 - 133

30. Investigation of heavy-ion fusion with deformed surface diffuseness Actinide and lanthanide targets

Seyed Alireza Alavi, Vahid Dehghani

PHYSICAL REVIEW C Volume: (95) 054602-1 - 054602-9

31. Alpha-induced reaction cross-section for Sm U Np targets influence of hexadecapole deformation and deformed surface diffuseness

Seyed Alireza Alavi, Vahid Dehghani

Chinese Physics C Volume: (41) 064104-1 - 064104-8

2016

32. با به کارگیری نظریه گینزبرگ-لاندائو اصلاح شده w185 و w184 خواص ترمودینامیکی هسته های

Vahid Dehghani, Ali Akbar Mehman Doost Khajeh Dad,

Iranian Journal of Physics Research Volume: (16) 165 - 172

33. Nuclear level density of even-even nuclei with temperature-dependent pairing energy

Vahid Dehghani, Seyed Alireza Alavi

EUROPEAN PHYSICAL JOURNAL A Volume: (52) 306 - 313

34. Back shifted Fermi gas model with temperature dependent pairing energy: Thermal properties of 98Mo

Seyed Alireza Alavi, Vahid Dehghani

INTERNATIONAL JOURNAL OF MODERN PHYSICS E-NUCLEAR PHYSICS Volume: (25) 1 - 10

35. Effect of quasi-particle number fluctuations on thermodynamic properties of ^{183}W , ^{184}W , ^{185}W

, Vahid Dehghani

INTERNATIONAL JOURNAL OF MODERN PHYSICS E-NUCLEAR PHYSICS Volume: (25) 1 - 9

36. Influence of nuclear deformation on level density parameter

Seyed Alireza Alavi, Vahid Dehghani

MODERN PHYSICS LETTERS A Volume: (31) 1 - 8

37. The effect of shell closure on the thermodynamic properties of ^{207}Pb and ^{89}Y

Vahid Dehghani, ,

INTERNATIONAL JOURNAL OF MODERN PHYSICS E-NUCLEAR PHYSICS Volume: (25) 650098 - 650098

38. The Effect of Curing Light Intensity on Free Volume Size in Some Dental Composites

Mahdiye Shirazinia, Ali Akbar Mehman Doost Khajeh Dad, Vahid Dehghani, Jamshid Mehmandoost-Khajeh-Da

Polimery w medycynie Volume: (46) 129 - 133

2014

39. The entropy excess and moment of inertia excess ratio with inclusion of statistical pairing fluctuations

Vahid Dehghani

INTERNATIONAL JOURNAL OF MODERN PHYSICS E-NUCLEAR PHYSICS Volume: (23) 1450015 - 1450015

40. Applying modified Ginzburg-Landau theory to nuclei

Vahid Dehghani, Ali Akbar Mehman Doost Khajeh Dad

PHYSICAL REVIEW C Volume: (90) 1 - 5

41. Pairing phase transition and thermodynamical quantities in ^{148}Sm and ^{149}Sm

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NUCLEAR PHYSICS A Volume: (930) 57 - 62

42. Pairing phase transition and thermodynamical quantities in ^{148}Sm and ^{149}Sm

, , Vahid Dehghani

NUCLEAR PHYSICS A Volume: (930) 57 - 62

Conferences Papers

2016

1. The relationship between the shape of a potential well and the ortho-positronium lifetime in spherical and elliptical nano pores based on the RTE model

The Annual Physics Conference of Iran 1395

, Ali Akbar Mehman Doost Khajeh Dad, Vahid Dehghani,

Executive activities

مدیر استعدادهاي درخشان

from 1396/11/14 - to 1399/06/01

مدیر استعدادهاي درخشان دانشگاه

from 1396/06/25 - to 1396/10/30