

# Roya Majidi



## CONTACT

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**Address:**

Department of Physics, Faculty of Science, Shahid Rajaee Teacher Training University (SRTTU)  
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## ORCID

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0000-0001-8451-3695



## LANGUAGES

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Persian

English

## Personal Information

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**Place of birth** Shemiran, Tehran, Iran

**Nationality** Iranian

## Current Position

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**Associate Professor** SRTTU

## Education

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**2006-2011 (1385-1390)**

**Ph.D.** in Condensed Matter of Physics  
Shahid Beheshti University, Tehran, Iran.

**Supervisor:** Prof. M.M. Tehranchi, Dr. K. Ghafoori Tabrizi

**Thesis:** Influence of Temperature and Light on  
Magnetotransport of Domain Wall in Nanowires.

**2003-2005 (1382-1385)**

**M.Sc.** in Condensed Matter of Physics  
Imam Khomeini International University, Ghazvin, Iran.

**Supervisor:** Prof. S. Jalili and Dr. M.R. Khanlari

**Thesis:** The study of gas adsorption on carbon nanotubes  
using molecular dynamics simulations and  
quantum mechanics calculations.

**1998-2002 (1377-1381)**

**B.Sc.** in Condensed Matter of Physics  
Islamic Azad University, Central Tehran Branch, Tehran, Iran

## Work Experience

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**2018-2019** Head of Physics Department, SRTTU

## Research Interest

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Condensed Matter of Physics  
Carbon nanostructures

## Awards and Honors

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Active Researcher, SRTTU (2020)

Distinguished Researcher, SRTTU (2018)

Excellent Teaching Award, SRTTU (2017)

Distinguished Researcher, SRTTU (2016)

Distinguished Researcher, SRTTU, Faculty of Science (2015)

The Best Poster Awards, 5<sup>th</sup> international conference on nanostructures, Kish, Iran (2014)

Distinguished Researcher, SRTTU (2013)

First Rank Student Award, Imam Khomeini International University (2005)

Third Rank Student Award, Islamic Azad University, Central Tehran Branch (2002)

Best Student Award, Islamic Azad University, Central Tehran Branch (2001)

## Publications

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(Corresponding author is highlighted with \*)

1. Journal of Computational and Theoretical Nanoscience 3 (2006) 664-669.  
*“The Effect of Gas Adsorption on Carbon Nanotubes Properties”*  
S. Jalili\* and **R. Majidi**
2. Physica E 39 (2007) 166-170.  
*“Study of Xe and Kr adsorption on open single-walled carbon nanotubes using molecular dynamics simulations”*  
S. Jalili\* and **R. Majidi**

3. Journal of Computational and Theoretical Nanoscience 4 (2007) 777-782.  
*"Atomic and Molecular Oxygen Adsorption on Sodium Nanoclusters"*  
S. Jalili<sup>\*</sup> and **R. Majidi**
4. Journal of Iranian Chemical Society 4 (2007) 431-437.  
*"The Effect of Atomic Hydrogen Adsorption on Single-Walled Carbon Nanotubes Properties"*  
S. Jalili<sup>\*</sup> and **R. Majidi**
5. Journal of Theoretical and Computational Chemistry 6 (2007) 803-810.  
*"The Effect of Gas Adsorption on the Electronic Properties of MgO and Ca-doped MgO"*  
S. Jalili, **R. Majidi** and K. Ghafoori Tabrizi
6. Physica B 403 (2008) 3522-3526.  
*"The Effect of Impurities on the Electronic Properties of MgO"*  
S. Jalili<sup>\*</sup> and **R. Majidi**
7. Physica B 404 (2009) 3417-3420.  
*"Electronic Properties of Boron Nitride and Carbon double-wall hetero nanotubes"*  
**R. Majidi**, K. Ghafoori Tabrizi and S. Jalili
8. Physica B 405 (2010) 2144-2148.  
*"Study of Neon Adsorption on Carbon Nano-Cones using Molecular Dynamics Simulation"*  
**R. Majidi** and K. Ghafoori Tabrizi<sup>\*</sup>
9. The European Physical Journal B 76 (2010) 475-480.  
*"Optical-Controlled Domain Wall Resistance in Magnetic Nanojunctions"*  
**R. Majidi**, M.M. Tehrani<sup>\*</sup>, A. Phirouznia and K. Ghafoori Tabrizi
10. Phys. Rev. B 83 (2011) 035413.  
*"Influence of Longitudinal Acoustic Phonons on Domain Wall Magnetoresistance in Magnetic Nanowires"*  
**R. Majidi**, M.M. Tehrani<sup>\*</sup>, A. Phirouznia and K. Ghafoori Tabrizi
11. Fullerenes, Nanotubes, and Carbon Nanostructures 19 (2011) 532-539.  
*"Electronic Properties of Defect-Free and Defective Bilayer Graphene in an Electric Field"*  
**R. Majidi** and K. Ghafoori Tabrizi<sup>\*</sup>

12. The European Physical Journal B 81 (2011) 209-213.  
*“The Influence of Longitudinal Optical Phonons on Domain Wall Resistance in Nanowires based on Diluted Magnetic Semiconductors”*  
**R. Majidi**, M.M. Tehranchi<sup>\*</sup>, A. Phirouznia and K. Ghafoori Tabrizi
13. Journal of Applied Chemical Research 19 (2011) 58-65.  
*“Density Functional Theory Study of Magnesium Hydride Nano Clusters”*  
**R. Majidi**<sup>\*</sup>
14. Journal of Superconductivity and Novel Magnetism 25 (2012) 1597-1601.  
*“Effect of Non-polar Longitudinal Optical Phonons on Domain Wall Resistance in Diluted Magnetic Semiconductor Nanowires”*  
**R. Majidi**<sup>\*</sup>, M.M. Tehranchi and A. Phirouznia
15. Nano: Brief Reports and Reviews 7 (2012) 1250023(5).  
*“Helium adsorption on Carbon Nanocones with Different Disclination Angle: Molecular Dynamics Simulation”*  
**R. Majidi**<sup>\*</sup>
16. Physica B 407 (2012) 4005-4007.  
*“Magnetic Field Control of 90°, 180°, and 360° Domain Wall Resistance”*  
**R. Majidi**<sup>\*</sup>
17. Molecular Physics 111 (2012) 89-93.  
*“A Biosensor for Hydrogen Peroxide Detection based on Electronic Properties of Carbon Nanotubes”*  
**R. Majidi**<sup>\*</sup>
18. Journal of Spintronics and Magnetic Nanomaterials 1 (2012) 147-150.  
*“Effect of Magnetic Field on Helimagnet Resistance”*  
**R. Majidi**<sup>\*</sup> and M.M. Tehranchi
19. International Nanoletters 3 (2013) 18 (5).  
*“Magnetoresistance of non-180° domain wall in the presence of electron-photon interaction”*  
**R. Majidi**<sup>\*</sup>
20. Nanoscience and Nanotechnology Letters 5 (2013) 750-753.  
*“Adsorption of Ternary Mixture of Noble Gases on Carbon Nanocone: Molecular Dynamics Simulation”*  
**R. Majidi**<sup>\*</sup>
21. Molecular Physics 111 (2013) 3194-3199.

*“Electronic properties of BN-doped bilayer graphene and graphyne in the presence of electric field”*

**R. Majidi**<sup>\*</sup> and A.R. Karami

22. Physica E 54 (2013) 177-180.

*“Detection of Hydrogen Peroxide with Graphyne”*

**R. Majidi**<sup>\*</sup> and A.R. Karami

23. Nano: Brief Reports and Reviews 8 (2013) 1350060(5).

*“Effect of Doping on the Electronic Properties of Graphyne”*

**R. Majidi**<sup>\*</sup>

24. Physica E 59 (2014) 169-173.

*“Adsorption of Formaldehyde on Graphene and Graphyne”*

**R. Majidi**<sup>\*</sup> and A.R. Karami

25. Fullerenes, Nanotubes, and Carbon Nanostructures 22 (2014) 520-527.

*“Molecular Dynamics Simulation of Noble Gases Adsorption on Carbon Nanotube Bundles”*

**R. Majidi**<sup>\*</sup>

26. Structural Chemistry 25 (2014) 853-858.

*“Electronic Properties of Bilayer and Trilayer Graphyne in the Presence of Electric Field”*

**R. Majidi**<sup>\*</sup> and A.R. Karami

27. Indian Journal of Physics 88 (2014) 483-487.

*“Nitrotyrosine Adsorption on Carbon Nanotube: A Density Functional Theory Study”*

**R. Majidi**<sup>\*</sup> and A.R. Karami

28. Computational Materials Science 97 (2015) 227-230.

*“Electronic Properties of B- and N- doped Graphyne Nanotubes”*

**R. Majidi**<sup>\*</sup> and A.R. Karami

29. Structural Chemistry 26 (2015) 5-10.

*“Aromatic Amino Acids Adsorption on Graphyne: A Density Functional Theory Study”*

**R. Majidi**<sup>\*</sup> and A.R. Karami

30. Physica E 70 (2015) 170-175.

*“Nitrotyrosine Adsorption on Defective Graphene: A Density Functional Theory Study”*

**R. Majidi**<sup>\*</sup> and A.R. Karami

31. Chemistry Letters 44 (2015) 1071-1072.

*“Detection of Toxic Gases with Graphyne Nanotubes, A Density Functional Theory Study”*

A.R. Karami<sup>\*</sup> and **R. Majidi**

32. Romanian Journal of Physics 30 (2015) 1474-1482.  
*“Detection of NO<sub>2</sub> adsorbed on graphyne nanotubes”*  
A.R. Karami and **R. Majidi**<sup>\*</sup>
33. Canadian Journal of Chemistry 94 (2016) 229-233.  
*“Band gap modulation of graphyne via chemical functionalization: A density functional theory study”*  
**R. Majidi**<sup>\*</sup>
34. Low Temperature Physics 182 (2016) 92-106.  
*“The Influence of the optical phonons on the non-equilibrium spin current in the presence of spin-orbit couplings”*  
K. Hasanirokh (student), A. Phirouznia<sup>\*</sup>, **R. Majidi**
35. Canadian Journal of Physics 94 (2016) 305-309.  
*“Electronic properties of porous graphene, a-graphyne, graphene-like, and graphyne-like BN sheets”*  
**R. Majidi**<sup>\*</sup>
36. Diamond & Related Materials 66 (2016) 47–51.  
*“Caffeine and nicotine adsorption on perfect, defective and porous graphene sheets”*  
**R. Majidi**<sup>\*</sup> and A.R. Karami
37. STUDIA UBB CHEMIA, 1 (2016) 177-184.  
*“Band gap modulation of graphene and graphyne via tetracyanoethylene adsorption”*  
**R. Majidi**<sup>\*</sup> and A.R. Karami
38. CERNE 22 (2016) 215-222.  
*“Adsorption of nanowollastonite on cellulose surface: Effects on physical and mechanical properties of medium density fiberboard (MDF)”*  
H.R. Taghiyari<sup>\*</sup>, **R. Majidi** and A. Jahangiri (student)
39. Journal of Mathematical Nanoscience 4 (2016) 18-22.  
*“Band gap modulation of graphyne: A density functional theory study”*  
**R. Majidi**<sup>\*</sup>
40. Journal of Computational Electronics 15 (2016) 1263-1268. (it is not JCR)  
*“Electronic properties of graphyne nanotubes filled with small fullerenes: a density functional theory study”*  
**R. Majidi**<sup>\*</sup>
41. Nano: Brief Reports and Reviews 15 (2017) 1263(1-11).

*“Adsorption patterns of helium on carbon and cellulose nanotubes: Molecular dynamics simulations”*

**R. Majidi**<sup>\*</sup>, H.R. Taghiyari and M. Ekhlesi (student)

42. Physica E 90 (2017) 189-193.

*“Mechanical properties of novel forms of graphyne under strain: A density functional theory study”*

**R. Majidi**<sup>\*</sup>

43. Fullerenes, Nanotubes, and Carbon Nanostructures 25 (2017) 265-268.

*“Structural and electronic properties of C and BN nanotubes based on periodic fullerenes: A density functional theory study”*

**R. Majidi**<sup>\*</sup> and M. Ghorbani

44. Romanian Reports in Physics 69 (2017) 503.

*“Nicotine adsorption on BN porous sheets: a density functional theory study”*

**R. Majidi**<sup>\*</sup> and A.R. Karami

45. Theoretical Chemistry Accounts 136 (2017) 109.

*“Density functional theory study on structural and mechanical properties of graphene, T-graphene, and R-graphyne”*

**R. Majidi**<sup>\*</sup>

46. Fullerenes, Nanotubes, and Carbon Nanostructures 25 (2017) 646.

*“Encapsulation of cellulose chain into carbon nanotubes and boron nitride nanotubes”*

**R. Majidi**<sup>\*</sup>, H.R. Taghiyari, O. Ori

47. Romanian Reports in Physics 69 (2017) 509.

*“Electronic Properties of O-doped porous graphene and biphenylene carbon: A density functional theory study”*

**R. Majidi**<sup>\*</sup>, M. Saadat and S. Davoodi (student)

48. Diamond & Related Materials 82 (2018) 96.

*“Structural and electronic properties of nitrogenated holey nanotubes: A density functional theory study”*

**R. Majidi**<sup>\*</sup>, M. Odelius, S. AlTaha

49. Journal of Electronic Materials 4 (2018) 2890.

*“Structural and electronic properties of  $\alpha$ 2-graphyne nanotubes: A density functional theory study”*

**R. Majidi**<sup>\*</sup>

50. Molecular Physics 117 (2019) 776.

*“Encapsulation of small fullerenes into nitrogenated holey*

*nanotubes: a density functional theory study"*

**R. Majidi**<sup>\*</sup>, M. Odelius, F. Babae

51. Journal of Physics and Chemistry of Solids 132 (2019) 31.  
*"Detection of HF and H2S with pristine and Ti-embedded twin graphene: A density functional theory study"*  
**R. Majidi**<sup>\*</sup>, R. Ramazani
52. Fullerenes, Nanotubes and Carbon Nanostructures, 27 (2019) 601.  
*"Density functional theory study of fullerenes adsorption on nitrogenated holey graphene sheet"*  
**R. Majidi**<sup>\*</sup>, M. Ghorbani
53. Cellulose Chemistry and Technology 5 (2019) 411.  
*"Electronic properties of graphene oxide in the presence of cellulose chains: A density functional theory approach"*  
**R. Majidi**<sup>\*</sup>, H.R. Taghiyari
54. Journal of Physics and Chemistry of Solids 135 (2019) 109115.  
*"Structural and electronic properties of BN co-doped and BN analogue of twin graphene sheets: A density functional theory study"*  
**R. Majidi**<sup>\*</sup>, T. Rabczuk
55. Journal of theoretical and applied physics 13 (2019) 1357-364.  
*"Effect of BN nanodots on the electronic properties of  $\alpha$ - and  $\beta$ -graphyne sheets: a density functional theory study"*  
**R. Majidi**, H. Eftekhari<sup>\*</sup>, H. Bayat, Kh. Rahmani, A. M. Khairogli
56. Physics Letters A 384 (2020) 126036.  
*"Detection of exhaled gas by  $\gamma$ -graphyne and twin-graphene for early diagnosis of lung cancer: A density functional theory study"*  
**R. Majidi**<sup>\*</sup>, M. Nadafan
57. Polymers 12 (2020) 303.  
*"Improving Fire Retardancy of BeechWood by Graphene"*  
A. Esmailpour, **R. Majidi**, H.R. Taghiyari<sup>\*</sup>, M. Ganjkhani, S.M. Mohseni Armaki, A.N. Papadopoulos
58. Polymers 12 (2020) 857.  
*"Engineering Composites Made from Wood and Chicken Feather Bonded with UF Resin Fortified with Wollastonite: A Novel Approach"*  
H.R. Taghiyari<sup>\*</sup>, **R. Majidi**, A. Esmailpour, Y. Sarvari Samadi, A. Jahangiri, A.N. Papadopoulos<sup>\*</sup>



59. Journal of Asian Ceramic Societies 8 (2020) 502-509.  
*"Study of optical constants and dielectric properties of nanocrystalline  $\alpha$ -cordierite ceramic"*  
M. Nadafan<sup>\*</sup>, **R. Majidi**
60. International Journal of Nano Dimensions 11 (2020) 112-119.  
*"Electronic properties of hydrogenated porous Graphene based nanoribbons: A density functional theory study"*  
**R. Majidi**<sup>\*</sup>, A.R. Karami, Kh. Rahmani, A.M. Khairogli
61. Polymers 12 (2020) 1435.  
*"Potential Use of Wollastonite as a Filler in UF Resin Based Medium-Density Fiberboard (MDF)"*  
H.R. Taghiyari<sup>\*</sup>, A. Esmailpour, **R. Majidi**, J.J. Morrell, M. Mallaki, H. Militz, A. Papadopoulos
62. Chemical Papers 74 (2020) 3581-3587.  
*"Tailoring the band gap of  $\alpha$ 2-graphyne through functionalization with carbene groups: a density functional theory study"*  
**R. Majidi**<sup>\*</sup>, T. Rabczuk
63. Molecular Simulation 74 (2020) 3581-3587.  
*"Detection of  $NO_x$  and  $CO_x$  ( $x = 1, 2$ ) molecules with T4,4,4-graphyne: a density functional theory study"*  
**R. Majidi**<sup>\*</sup>, U. Sarkar
64. Molecular Simulation 46 (2020) 1383-1389.  
*"Detection of  $NO_x$  and  $CO_x$  ( $x = 1, 2$ ) molecules with T4,4,4-graphyne: a density functional theory study"*  
**R. Majidi**<sup>\*</sup>, U. Sarkar
65. Fullerenes, Nanotubes, and Carbon Nanostructures 29 (2021) 114-125.  
*"Novel results on entropy-based measures of fullerenes"*  
M. Ghorbani<sup>\*</sup>, M. Rajabi-Parsa, **R. Majidi**, R. Abdullah Mirzaie
66. IEEE Transactions on Instrumentation and Measurement 70 (2021) 114-125.  
*"Effects of Adsorption Energy on Air and Liquid Permeability of Nanowollastonite-Treated Medium-Density Fiberboard"*  
A. Esmailpour, H.R. Taghiyari<sup>\*</sup>, **R. Majidi**, S. Babaali, J.J. Morrell, B. Mohammadpanah
67. Monatshefte für Chemie - Chemical Monthly 152 (2021) 61-66.  
*"Tuning electronic properties of bilayer  $\alpha$ 2-graphyne by external electric field: a density functional theory study"*  
**R. Majidi**<sup>\*</sup>, U. Sarkar

68. Forests 12 (2021) 63.  
*"Penetration of Different Liquids in Wood-Based Composites: The Effect of Adsorption Energy"*  
H.R. Taghiyari\*, **R. Majidi**, M.G. Arsalan, A. Moradiyan, H. Militz, G. Ntalos, A.N. Papadopoulos
69. Solid State Communications 330 (2021) 114286.  
*"Electronic properties of edge functionalized S-graphene nanoribbons"*  
**R. Majidi**\*
70. Wood Material Science & Engineering 16 (2021) 161-165.  
*"Nano-wollastonite to improve fire retardancy in medium-density fiberboard (MDF) made from wood fibers and camel-thorn"*  
A. Esmailpour, H.R. Taghiyari\*, **R. Majidi**, J.J. Morrell, B. Mohammad-Panah
71. Physica E 133 (2021) 114806.  
*"Electronic properties of transition metal embedded twin T-graphene: A density functional theory study"*  
**R. Majidi**\*, A. Ramazani, T. Rabczuk
72. Wood Material Science & Engineering (accepted).  
*"The effect of silver and copper nanoparticles as resin fillers on less-studied properties of UF-based particleboards"*  
H.R. Taghiyari\*, A. Esmailpour, **R. Majidi**, V. Hassani, R.A. Mirzaei, O. Farajpour Bibalan, A.N. Papadopoulos
73. Diamond and related Materials 118 (2021) 108520.  
*"Structural and electronic properties of S-graphene nanotubes: A density functional theory study"*  
**R. Majidi**\*

### Publication (in ISC Persian Journals)

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۱. طراحی اهداف و محتوای چند درس اختیاری در فناوری نانو در مقطع کارشناسی برای دانشکده‌های فنی - مهندسی و علوم پایه  
فصلنامه مطالعات اندازه‌گیری و ارزشیابی آموزشی، سال پنجم، شماره ۱۰، تابستان ۱۳۹۴، صفحه ۱۷۹-۲۰۰.  
علیرضا کرمی گزافی\*، زهرا نیکنام (دانشجو)، رویا مجیدی
۲. شبیه‌سازی دینامیک مولکولی جذب مخلوط اکسیژن و نیتروژن روی نانومخروط و نانولوله کربنی  
شیمی و مهندسی شیمی ایران، شماره ۲، ۱۳۹۶

### Conference (International)

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1. The 6<sup>th</sup> Canadian Computational Chemistry Conference, University of British Columbia Vancouver, British Columbia, Canada (2006).  
*“Study of Xe and Kr Adsorption on Open-Single Walled Carbon Nanotubes using Molecular Dynamics”*  
S. Jalili and **R. Majidi**
2. The International Conference on Superconductivity and Magnetism ICSM, Turkey (2010)  
*“Magnetoresistance of the domain wall in a magnetic nanowire in the presence of pulsed magnetic field”*  
**R. Majidi**, M.M. Tehranchi, A. Phirouznia and K. Ghafoori Tabrizi
3. The International Conference Trends in Spintronics and Nanomagnetism, Lecce, Italy (2010)  
*“The Effect of a Pulsed Magnetic Field on Domain Wall Resistance in Magnetic Nanowires”*  
Journal of Physics: Conference Series 292 (2011) 012009.  
**R. Majidi**, M.M. Tehranchi, A. Phirouznia and K. Ghafoori Tabrizi
4. 3<sup>th</sup> International Conference on Superconductivity and Magnetism ICSM, Turkey (2012)  
*“Influence of Photon on Magnetoresistance of non-180° Domain Wall”*  
**R. Majidi** and M.M. Tehranchi
5. 3<sup>th</sup> International Conference on Superconductivity and Magnetism ICSM, Turkey (2012)  
*“Magnetic Field Control of Helimagnet Resistance”*  
**R. Majidi** and M.M. Tehranchi
6. The 4<sup>th</sup> International Conference on Nanostructures, Kish, Iran (2012)  
*“Magnetoresistance of non-180 Domain Wall in Metallic Nanowires”*  
**R. Majidi**, S. Ghanbarzadeh and N. Jodaeeasl
7. The 4<sup>th</sup> International Conference on Nanostructures, Kish, Iran (2012)  
*“Molecular Dynamics Simulation of Helium Adsorption on carbon Nanocones with Disclination angle of 240 and 300”*  
**R. Majidi** and M.M. Tehranchi
8. The 5<sup>th</sup> International Conference on Nanostructures, Kish, Iran

(2014)

*“Electronic Properties of Bilayer Graphene and Graphyne”*

A.R. Karami and **R. Majidi**

9. The 5<sup>th</sup> International Conference on Nanostructures, Kish, Iran (2014)  
*“Helium Adsorption on Carbon Nanotube Bundles with Different Diameters: Molecular Dynamics Simulation”*  
A.R. Karami and **R. Majidi**
10. The 2<sup>th</sup> International Conference on Nanotechnology, Istanbul, Turkey (2014)  
*“Helium Adsorption on Homogenous Carbon Nanotube Bundles”*  
**R. Majidi** and A.R. Karami
11. The 2<sup>th</sup> International Conference on Nanotechnology, Istanbul, Turkey (2014)  
*“TCNE and TDAE adsorption on Graphyne”*  
A.R. Karami and **R. Majidi**
12. The 3<sup>th</sup> workshop on OpenMX/QMAS, Tokyo, Japan (2015)  
*“Adsorption of NO<sub>2</sub> on graphyne nanotube: A density functional theory study”*  
**R. Majidi** and A.R. Karami
13. Nanomeeting 2015, Minsk, Belarus (2015)  
*“Electronic properties of oxygen doped graphyne”*  
**R. Majidi**, A.R. Karami and M. Ghamooshi Ramandi
14. Nanomeeting 2015, Minsk, Belarus (2015)  
*“Helium adsorption on homogenous and heterogeneous bundles of carbon nanotubes”*  
A.R. Karami, **R. Majidi** and N. Jodaee Asl
15. 3<sup>th</sup> OpenMX.QMAS workshop, Japan (2015)  
*“Adsorption of NO<sub>2</sub> on graphyne nanotube: A density functional theory study”*  
**R. Majidi** and A.R. Karami
16. 3<sup>th</sup> OpenMX.QMAS workshop, Japan (2015)  
*“Adsorption of NO<sub>2</sub> on graphyne nanotube: A density functional theory study”*  
**R. Majidi** and A.R. Karami
17. 18<sup>th</sup> International workshop on computational physics and materials science, Trieste, Italy (2017)  
*“Electronic properties of BN-doped T graphyne: A density functional theory study”*  
**R. Majidi**
18. Nanomeeting 2017, Minsk, Belarus (2017)

*“Porous graphene sheet for detecting small amounts of nicotine: A density functional theory study”*

**R. Majidi**

### **Conference (National)**

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1. The Iranian Physics Seminar, Shahrod University, Iran, Shahrivar 6-9 (1385).  
*“The Effect of Gas Adsorption on Electronic Properties of Carbon Nanotubes”*
2. The 8<sup>th</sup> Iranian Physical Chemistry Seminar, Ferdowsi University of Mashhad, Iran, November 21-24 (2005).  
*“The Effect of Gas Adsorption on Carbon Nanotubes Properties”*
3. The 9<sup>th</sup> Iranian Physical Chemistry Seminar, Guilan University, Rasht-Zibakenar, Iran, June 13-15 (2006).  
*“The Effect of Atomic Hydrogen Adsorption on Single-Walled Carbon Nanotubes Properties”*
4. The 10<sup>th</sup> Iranian Physical Chemistry Seminar, University of Isfahan, Iran, April 23-26 (2007).  
*“Atomic and Molecular Oxygen Adsorption on Sodium Nano Clusters”*
5. The 14<sup>th</sup> Meeting on Condensed Matter Physics, Institute for Advanced Studies in Basic Sciences, Gave Zang, Zanjan, Iran, May 22-23 (2008)  
*“The Effect of Gas Adsorption on the Electronic Properties of MgO and Ca-doped MgO”*
6. The 11<sup>th</sup> Iranian Physical Chemistry Seminar, Ardabil-University of Mohaghegh Ardabili, Iran, July 21-24 (2008)  
*“The Effect of Impurity on Electronic Properties of Mg”*
7. The 12<sup>th</sup> Iranian Physical Chemistry Seminar, Kordestan-University of Sanandaj, Iran, July (2009)  
*“Stability and Electronic Properties of Magnesium Hydride Nano Clusters”*
8. The 12<sup>th</sup> Iranian Physical Chemistry Seminar, Kordestan-University of Sanandaj, Iran, July (2009)  
*“Electronic Properties of Boron Nitride and Carbon double-wall hetero nanotubes”*
9. The 9<sup>th</sup> Iranian Condensed Matter Conference, Shahid chamran University, Ahvaz, Iran, Bahman (1387)  
*“Electronic Properties of Boron Nitride and Carbon double-wall hetero nanotubes”*

10. The 16<sup>th</sup> Iranian Conference on Optics and Photonics, Yazd University, Yazd, Iran, January (2010-1388)  
*“Optical Controlled Domain Wall Resistance in Magnetic Nanowires”*
11. Seminar on Nano-Computing, Shahid Rajaei Teacher Training University, Iran, Aban (1389)  
*“The Study of Noble Gas Adsorption on Carbon Nanotube Bundles using Molecular Dynamics Simulations”*
12. The 9<sup>th</sup> Iranian Condensed Matter Conference, Shiraz University, Shiraz, Iran, Bahman (1389)  
*“The Effect of Non-Polar Optical Phonons on Domain Wall Magnetoresistance”*
13. The 9<sup>th</sup> Iranian Condensed Matter Conference, Shiraz University, Shiraz, Iran, Bahman (1389)  
*“Study of Xenon Adsorption on Carbon Nanotube Bundle using Molecular Dynamics Simulations”*
14. The 18<sup>th</sup> Iranian Conference on Optics and Photonics, Tabriz University, Tabriz, Iran, Bahman (2012-1390)  
*“The Effect of Light on Magnetoresistance of 90° and 180° Domain Walls”*  
**R. Majidi** and M.M. Tehrani
15. The 11<sup>th</sup> Iranian Conference on Nanotechnology, Amir Kabir University, Tehran, Iran, Esfand (1389)  
*“The Effect of Light on Magnetoresistance of Domain Wall in Metallic Nanowires”*  
**R. Majidi**, M.M. Tehrani, A. Phirouznia, and K. Ghafoori Tabrizi
16. The 4<sup>th</sup> International Conference on Nanostructures, Kish, Iran, Esfand (1390)  
*“Magnetoresistance of non-180 Domain Wall in Metallic Nanowires”*  
**R. Majidi**, S. Ghanbarzadeh, N. Jodaeasl
17. The 4<sup>th</sup> International Conference on Nanostructures, Kish, Iran, Esfand (1390)  
*“Molecular Dynamics Simulation of Helium Adsorption on carbon Nanocones with Disclination angle of 240 and 300”*  
**R. Majidi** and M.M. Tehrani
18. The 4<sup>th</sup> National Conference on Education, Shahid Rajaei Teacher Training University, Iran, May-Ordibehesht (2012-1391)  
*“Improvement of Teaching Physics to Engineering Students with Problem Based Learning”*  
**R. Majidi**

19. 19<sup>th</sup> Spring Physics Conference, Institute for Research in Fundamental Sciences (IPM), Iran, May-Ordibehesht (2012-1391)  
*“Influence of Temperature on Resistance of Domain Wall in Metallic Nanowires”*  
**R. Majidi** and M.M. Tehranchi
20. 11<sup>th</sup> Iranian Condensed Matter Conference, Shahrod, Iran, Bahman (1391)  
*“Effect of Oxygen Impurity on Electronic Properties of Graphyne”*  
**R. Majidi**, M. Neek-Amal, M. Ghamooshi Ramandi
21. 11<sup>th</sup> Iranian Condensed Matter Conference, Shahrod, Iran Bahman (1391)  
*“Molecular Dynamics Simulation of Gas Adsorption on Heterogeneous Carbon Nanotube bundle”*  
**R. Majidi**, N. Jodaiee, R. Rashidi
22. The 11<sup>th</sup> Iranian Conference on Nanotechnology, Iran, Dey (1392)  
*“Effect of Boron Impurity on Electronic Properties of Graphyne”*  
M. Ghamooshi Ramandi, **R. Majidi**, M. Neek-Amal
23. The 11<sup>th</sup> Iranian Conference on Nanotechnology, Iran, Dey (1392)  
*“Molecular Dynamics Simulation of Gas Adsorption on Heterogeneous Carbon Nanotube bundle”*  
N. Jodaiee, **R. Majidi**, R. Rashidi
24. 8<sup>th</sup> Educational Chemistry Conference, Semnan, Iran, Shahrivar (1392)  
*“ارایه روشنی جامع برای موازنه واکنش های شیمیایی و بررسی کارایی آن بر پیشرفت تحصیلی دانش آموزان سوم دبیرستان”*  
A.R. Karami, K. Asfini Farahani, **R. Majidi**
25. The 15<sup>th</sup> Iranian Conference on Nanotechnology, Tehran, Iran, Ordibehesht (1393)  
*“Effect of Nitrotyrosine on the Electronic Properties of Carbon Nanotubes”*  
**R. Majidi**, M. Mohammadi
26. 21<sup>th</sup> Spring Physics Conference, Institute for Research in Fundamental Sciences (IPM), Iran, Ordibehesht (1393)  
*“Effect of TCNE on Electronic Properties of Graphyne”*  
**R. Majidi**, A.R. Karami
27. 13<sup>th</sup> Iranian Condensed Matter Conference, Isfahan, Iran, Bahman (1393)

*“Study N<sub>2</sub> and O<sub>2</sub> adsorption on carbon nanocones using molecular dynamics simulations”*

**R. Majidi** and Kh. Mansori

28. 22<sup>th</sup> Spring Physics Conference, Institute for Research in Fundamental Sciences (IPM), Iran, Ordibehesht (1394)

*“Nitrotyrosine adsorption on pristine and Al-doped carbon nanotubes”*

**R. Majidi**, A.R. Karami

### **Research Project (in Persian)**

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۱. مقاومت دیواره مغناطیسی غیر ۱۸۰ در نانوسیم های مغناطیسی

رویا مجیدی (مجری)

۹۰/۹/۹ – ۹۱/۴/۲۷

محل اعتبار: دانشگاه تربیت دبیر شهید رجایی (طرح درون دانشگاهی)

۲. اثر نیتروسیلین بر روی خواص الکترونیکی نانوساختارهای کربنی

رویا مجیدی (مجری)، علیرضا کرمی گزافی (همکار)

۹۳/۷/۲۲ – ۹۴/۳/۹

محل اعتبار: دانشگاه تربیت دبیر شهید رجایی (طرح درون دانشگاهی)

۳. تشخیص گازهای سمی با استفاده از نانولوله های گرافیتی

علیرضا کرمی گزافی (مجری)، رویا مجیدی (همکار)

۹۳/۱۲/۱۰ – ۹۴/۴/۲۹

محل اعتبار: دانشگاه تربیت دبیر شهید رجایی (طرح درون دانشگاهی)

۴. خواص الکترونی صفحات کربنی و نیتريد بور با ساختاری مشابه گرافن - T

رویا مجیدی (مجری)

۹۴/۶/۳۱ – ۹۴/۸/۱۷

محل اعتبار: دانشگاه تربیت دبیر شهید رجایی (طرح درون دانشگاهی)

۵. سنجش مواد اعتیادآور با استفاده از نانوحسگرهای کربنی

رویا مجیدی (مجری)

۹۵/۵/۳۰ – ۹۵/۱۰/۷

محل اعتبار: دانشگاه تربیت دبیر شهید رجایی (طرح درون دانشگاهی)

۶. جذب همدمای گازهای نجیب روی نانوالیافهای گرافیتی

رویا مجیدی (مجری)

۹۵/۵/۳۰ – ۹۵/۶/۱۵



محل اعتبار : دانشگاه تربیت دبیر شهید رجایی (طرح درون دانشگاهی)

۷. خواص الکترونی هتروفلورن‌های متناوب، مطالعه نظریه تابعی چگالی  
رویا مجیدی (مجری)، مجتبی قربانی (همکار)  
۹۵/۱۱/۱۷ – ۹۶/۱/۲۶

محل اعتبار : دانشگاه تربیت دبیر شهید رجایی (طرح درون دانشگاهی)

۸. مطالعه جذب نیکوتین و کافئین روی نانوساختارهای گرافینی با استفاده از  
نظریه تابعی چگالی  
رویا مجیدی (مجری)، علیرضا کرمی گزافی (همکار)  
۹۵/۱۰/۶ – ۹۴/۲/۲۰

محل اعتبار : صندوق حمایت از پژوهشگران و فناوران کشور (طرح برون  
دانشگاهی)

۹. اصلاح خواص الکترونی نانولوله‌های کربنی و نیتريد بور با استفاده از زنجیره‌ی  
سلولز  
رویا مجیدی (مجری)، حمیدرضا تقی‌یاری (همکار)  
۹۶/۴/۳ – ۹۶/۶/۸

محل اعتبار : دانشگاه تربیت دبیر شهید رجایی (طرح درون دانشگاهی)

۱۰. سهم دیواره مغناطیسی در مقاومت نانواتصالات فرومغناطیس  
رویا مجیدی (مجری)  
۹۶/۶/۸ – ۹۵/۵/۲۱

محل اعتبار : دانشگاه تربیت دبیر شهید رجایی (طرح درون دانشگاهی)

## **Books (in Persian)**

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۱. راهنمای مسائل فیزیک حالت جامد،

رویا مجیدی، حمید افتخاری

چاپ اول (۱۳۹۳)

Solution to Programs in Condensed Matter of Physics

Roya Majidi, Hamid Eftekhar

First Edition (2014)

چاپ دوم (۱۳۹۵)

Second Edition (2016)

۲. دستور کار آزمایشگاه فیزیک پایه ۱،

رویا مجیدی، حسین بدآغی، مرضیه عبدالملکی

چاپ اول (۱۳۹۹)

Manual of Physics Lab 1  
Roya Majidi, H. Bodaghi, M. Abdolmaleki  
First Edition (2020)

۳. فیزیک محاسباتی،

رویا مجیدی، فرزانه بابایی

چاپ اول (۱۳۹۹)

Computational Physics  
Roya Majidi, F. Babaee  
First Edition (2020)

