

Curriculum vitae

رزومه

PERSONAL DETAILS

مشخصات فردی

First Name: Mahboubeh

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SKILLS & INTERESTS

- DFT calculations through simulation packages of SIESTA, QUANTUM ESPRESSO.
- Electronic, Magnetic, Phonon and Optical Properties of Nanostructures
- Preparation and thermal conductivity measurements of nanofluids.
- Spectroscopy techniques: Ion beam/ laser beam spectroscopy, photoelectron spectroscopy (XPS, UPS), Fourier transform infrared spectroscopy (FTIR)

QUALIFICATIONS

تحصیلات

1. (1999) BSc. in Physics, Ferdowsi University of Mashhad, Iran.
2. (2005) Master of philosophy in Atomic, Molecular and Optical Physics, University of Newcastle upon Tyne. UK. Thesis title: *visible laser spectroscopy of molecular ions*
3. (2012) PhD in Solid State physics, Ferdowsi University of Mashhad, Iran. Thesis title: *Study of the physical properties of diamond nanoparticles and thermal conductivity of diamond nanofluids*

1. Atomic hydrogen treatment of nanodiamond powder, **M. Yeganeh**, P.R. Coxon, A.C. Brieva, V.R. Dhanak, L. Šiller, Yu.V. Butenko, Phys. Rev. B 75, 155404 (2007)
2. Forced convective heat transfer of nanofluids, Y. Ding, H. Chen, Y. He, A. Lapkin, **M. Yeganeh**, L. Šiller, Y. V. Butenko, Advanced Powder Technol., Vol. 18, No. 6, pp. 813–824 (2007)
3. Stability of hydrogenated nanodiamonds under extreme ultraviolet irradiation, Yu.V. Butenko, P.R. Coxon, **M. Yeganeh**, A.C. Brieva, K. Liddell, V.R. Dhanak, L. Šiller, Diamond and Relat. Mater. (2008)
4. Volume fraction and temperature variations of the effective thermal conductivity of nanodiamond fluids in deionized water, **M. Yeganeh**, N. Shahtahmasebi, A. Kompany, E. K. Goharshadi, A. Youssefi, L. Šiller, Int. J. of Heat and Mass Transfer, Vol 53, pp. 3186-3192 (2010)
5. Nanoparticles of Ni/NiO embedded in TiO₂ synthesized by the complex-polymer sol-gel method, Masoud Karimipour, J Magnus Wikberg, Vassilios Kapaklis, Nasser Shahtahmasebi, Mahmood Rezaee Rokn Abad, **M Yeganeh**, M M Bagheri-Mohagheghi and Peter Svedlindh Phys. Scr. 84 035702 (2011)
6. Structural and spectroscopic study of Fe-doped TiO₂ nanoparticles prepared by sol-gel method, N. Nasralla, **M. Yeganeh**, Y. Astuti, S. Piticharoenphun, N. Shahtahmasebi, A. Kompany, M. Karimipour, B. Mendis, N. Poolto, L. Siller, Scientia Iranica F, 20(3) (2013), 1018-1022.
7. The magnetic properties of Fe doped TiO₂ semiconducting oxide nanoparticles synthesized by sol-gel method, **M. Yeganeh**, N. Shahtahmasebi, A. Kompany, M. Karimipour, F. Razavi, N. H. S. Nasralla, L. Siller, Physica B, 511 (2017) 89-88.
8. Ab initio study of thermodynamic properties of bulk zinc-blende CdS: Comparing the LDA and GGA, F. Badieian Baghsiyahi, A. Akhtar, **M. Yeganeh**, International Journal of Modern Physics B, 32 (2018) 1850207.

9. Systematic study of electronic properties of Fe-doped TiO₂ nanoparticles by X-ray photoemission spectroscopy, N. H. S. Nasralla, **M. Yeganeh**, Y. Astuti, S. Piticharoenphun, L. Siller, Journal of Materials Science: Materials in Electronics, 29 (2018) 17956–17966
10. Structural and Optical Properties of Fe Doped TiO₂ Nanoparticles, **M. Yeganeh**, F. Badieian Baghsiyahi, JOURNAL OF RESEARCH ON MANY BODY SYSTEMS 8 (2018) 183-192
11. Exploring the sensitivity of nanodiamond to sarafloxacin: A DFT approach, **M. Yeganeh**, F. Badieian Baghsiyahi, Journal of Physics and Chemistry of Solids, 124 (2019) 235-241
12. Ab initio Study of Electronic and Transport Anisotropy of two Square and Rectangle Phosphorene Nanoflakes, **M. Yeganeh**, F. Badieian Baghsiyahi, R. Pilevar Shahri, Applied Physics A 125 (2019) 545
13. ZnO Nanoparticles as a Sensitive Platform for Detection of Nitration in Tyrosine and Tryptophan: A DFT Study, P. S. Maddahi, **M. Yeganeh**, F. Badieian Baghsiyahi, Materials Chemistry and Physics 237 (2019) 121857
14. Vibrational and Thermodynamical Properties of MgO Nanosheets of (111) and (100) Facets by Density Functional Theory, **M. Yeganeh**, F. Badieian Baghsiyahi, Journal of Electronic Materials 48 (2019) 3816-3822
15. Effects of strain on the electronic and optical properties of MgO (111) nanosheet, **M. Yeganeh**, F. Kafi, Optik, 186 (2019) 395-404
16. Investigation of Structural and Optical Properties of Cr Doped TiO₂ Synthesized at Different Annealing Temperature by Analyzing the XRD Patterns and DRS Spectroscopy, **M. Yeganeh**, F. Badieian Baghsiyahi, M. Mousavi, Iranian Journal of Crystallography and Mineralogy 27 (2019) 221-230
17. Study of the Quantum Confinement Effects and Stability Properties of Small Nanoclusters of Bare and Hydrogenated Diamond, **M. Yeganeh**, F. Badieian Baghsiyahi, R. Pilevar Shahri, Acta Physica Polonica, A 136 (2019) 151-157
18. A Density Functional Study on the Sensitivity of Small ZnO Nanoclusters to Sulfamethazine Considering Semilocal and Nonlocal Functionals, **M. Yeganeh**, P.S. Maddahi, F. Badieian Baghsiyahi, Journal of Electronic Materials 49 (2020), 1273-1281
19. Effects of Fe and Ni co-doping on the optical properties of TiO₂ thin films, **M. Yeganeh**, M. Mousavi, International journal of Nanoscience, 19 (2020) 1850046

20. The Effect of Strain on the Zigzag and Armchair Phosphorene Nanoribbon, F. Badieian Baghsiyahi, **M. Yeganeh**, Physica E: Low-dimensional Systems and Nanostructures 121 (2020) 114088
21. Thermoelectric properties of InN graphene-like nanosheet: A first-principle study **M. Yeganeh**, F. Kafi, A. Boochani, Superlattices and Microstructures, 138 (2020) 106367
22. First principles investigation of vibrational, electronic and optical properties of graphene-like boron carbide, **M. Yeganeh**, H. Hoseinzadeh Saraf, F. Kafi, A. Boochani, Solid states Communications, 305 (2020) 113750
23. GGA and Meta-GGA study of electronic, optical and thermoelectric properties of fluorinated borophene, D. Vahedi Fakhrabad, **M. Yeganeh**, Superlattices and Microstructures, 143 (2020) 106553
24. Stability and thermoelectric properties of the MgO monolayers under tensile and compressive strain, **M. Yeganeh**, F. Kafi, Physica E: Low-dimensional Systems and Nanostructures, 123 (2020) 114176
25. Electronic structure and magnetic properties of the CoFeMnZ (Z=As and Si) Heuslers by XAS, XMCD and MOKE: A DFT study, M. Ilkhani, **M. Yeganeh**, A. Boochani, A. Yari, Materials Today Communications, 26 (2021) 101773
26. Investigation of the stability, electronic structure, and magnetic properties of Sc₂VZ (Z=Ge, Si) Heusler alloys: First-principles calculations, A. Yari, **M. Yeganeh**, F. Dezfili, A. Boochani, Materials Science and Engineering B, 267 (2021) 115096
27. Phonon transport properties of two-dimensional group-III nitrides (BN, AlN, and GaN), Superlattices and Microstructures, **M. Yeganeh**, D. Vahedi Fakhrabad, 156 (2021) 106984
28. The WS₂/AlN heterostructure band alignment by semi-local functional and its optical properties by the Bethe-Salpeter approximation on top of GW calculations, **M. Yeganeh**, A. Boochani, A. Yari, M. Amiri, A. T. Shahraki, Materials Science in Semiconductor Processing 148 (2022) 106772
29. Investigation of the effect of lattice thermal conductivity on the thermoelectric performance of ScN monolayer, D. V. Fakhrabad, **M. Yeganeh**, Materials Science in Semiconductor Processing 148 (2022) 106770

30. Piezoelectric properties in two-dimensional GeC and its surface functionalization by chlorination, fluorination, and chloro-fluorination , DV Fakhrabad, **M Yeganeh**, Materials Science in Semiconductor Processing 148 (2022) 106797
31. Piezoelectric properties in hydrofluorination surface-engineered two-dimensional ScN, **M. Yeganeh**, DV Fakhrabad , Micro and Nanostructures 171 (2022) 207424
32. Microstructure, catalytic activity, magnetic and electronic properties of Ni₃Al, Ni₃Ga and Ni₃Sn melt spun intermetallics from experimental and DFT computational standpoints, P Czaja, A Boochani, J Przewoźnik, **M. Yeganeh**, A Zelati, A Yari, M Amiri, S Naderi, M. Fitta, D Duraczyńska, EM Serwicka, K Stan-Głowińska, L Lityńska-Dobrzyńska , Journal of Alloys and Compounds 927 (2022) 167076
33. Lattice thermal conductivity and thermoelectric properties of two-dimensional honeycomb monolayer of CdO, **M. Yeganeh**, D Vahedi Fakhrabad, Solid State Communications 378 (2024) 115391
34. Tuning the electronic and optical properties of Co₂TiGe Heuslerene by selecting Ge- or Ti- termination structure, **M. Yeganeh**, F Ghafari Eslam, M Ilkhani, A Yari, A Boochani, Results in Physics 58 (2024) 107438

Conferences

1. Atomic hydrogen treatment of nanodiamond powder ,YV Butenko, M Yeganeh, PR Coxon, AC Brieva, VR Dhanak, L Siller; **Diamond conference, Berlin**, Germany 9-14 September 2007.
2. Structural and spectroscopic study of Fe-doped TiO₂ nanoparticles prepared by sol-gel method, N. Nasralla, M. Yeganeh, Y. Astuti, S. Piticharoenphun, N. Shahtahmasebi, A. Kompany, M. Karimipour, B. Mendis, N. Poolto, L. Siller, **3rd International conference on Ultrafine Grained and Nanostructured Materials**, Tehran, Iran, 2-3 November 2011.
3. Measurements of Thermal Conductivity of Nanodiamond Fluids in Engine Oil, M. Yeganeh, N. Shahtahmasebi, A. Kompany, E. K. Goharshadi, A. Youssefi, L. Šiller, **International congress on Nanoscience and Nanotechnology (ICNN2012)**, Kashan, Iran, 8-10 Sep 2012.
4. 6. M. Yeganeh, F. Badieian Baghsiyahi, **'Study the structural properties and X-ray Analysis of 3% Fe-Doped TiO₂ Nanoparticles by Williamson-Hall Method'**, 25th Symposium of Crystallography and Mineralogy of Iran, Yazd, Jan. 2017.

5. 8. M. Yeganeh, F. Badieian Baghsiyahi, 'X-ray Analysis of Cu Doped TiO₂ Nanoparticles Prepared by Sol-Gel Method by Williamson-Hall Method', Annual Physics Conference of Iran, Yazd, Sep. 2017.
6. F. Badieian Baghsiyahi, M. Yeganeh, A. Akhtar, 'Effects of pressure on phonon dispersion and reststrahlen band of CdS', Annual Physics Conference of Iran, Tabriz, Sep. 2019.
- 7 F. Badieian Baghsiyahi, M. Yeganeh, 'Comparing the Strain Effect on Zigzag and Armchair Direction on Phosphorene Monolayer', Annual Physics Conference of Iran, Tabriz, Sep. 2019.

سوابق اجرایی

- ✓ عضو هیات علمی دانشگاه کوثر (از 1394/10/9 تا کنون)
- ✓ رئیس گروه کارآفرینی و ارتباط با صنعت دانشگاه کوثر (1394/12/9 تا 1397/10/1)
- ✓ عضو حقوقی شورای پژوهشی دانشگاه کوثر (1394/12/9 تا 1397/10/1)
- ✓ عضو کمیته علمی-تخصصی آزمایشگاههای دانشگاه کوثر (1395/1/26 به مدت یکسال)
- ✓ عضو کارگروه نظارت، ارزیابی و تضمین کیفیت امور فرهنگی و اجتماعی دانشگاه (1396/12/14 تا 1397/10/2)
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- ✓ عضو کمیته اجرایی سند تحول جهت تدوین برش دانشگاهی طرح تحول (1401/07/10 تا کنون)
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- ✓ عضو شورای دانشگاه (از 1401/11/5)
- ✓ عضو هیئت ممیزه مشترک دانشگاهها و موسسات آموزش عالی و پژوهشی استان خراسان شمالی (از 1403/05/23)

- ✓ دانشجوی برتر در بین دانشجویان تحصیلات تکمیلی گرایش حالت جامد دانشگاه فردوسی مشهد در آذر 1388
- ✓ پژوهشگر فعال در دانشگاه کوثر بجنورد در سال 1398
- ✓ پژوهشگر برتر در دانشگاه کوثر بجنورد در سال 1399

اصول لیزر 1	فیزیک 1 و آزمایشگاه
اصول لیزر 2	فیزیک 1 و آزمایشگاه
اسپکتروسکوپی لیزری	فیزیک مدرن
لیزرهای گازی	ریاضی مهندسی
لیزرهای قدرت	الکترومغناطیس 1
کاربردهای لیزر	الکترومغناطیس 2
مکانیک کوانتومی 1	ایمنی لیزر
	زبان تخصصی

