



/ Protein Research Center

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Education

- B.Sc: SHAHID BEHESHTI UNIVERSITY, Physics - Condensed matter
- M.Sc: ,
- Ph.D: ,

Research Interests

■ .

Professional Experiences

- , 1400→1402

Books

- COVID-19 Science to social Impact
Moones Rahmandoust, Seyyed Omid Ranaee Siadat
شابک: 5-3108-16-981-978, Singapore, 2021, اسپرینگر
- The Main Protease of SARS COV-2 and Its Specific Inhibitors
Abdurahman Ghasemlo, Yahya Sefidbakht, Moones Rahmandoust
شابک: 54-3108-16-981-978, Springer Nature, 2021
- Nanomaterials for Advanced Biological Applications
Moones Rahmandoust, Majid Reza Ayatollahi
شابک: 9783030108335, Springer, 2019
- Carbon Quantum Dots in Nanobiotechnology
Hamidreza Behboudi, Golnaz Mehdipour, Nooshin Safari, Arezoo Saie, Mehrab Pourmadadi Golaki, Meisam Omid, Lobat Tayebi, Moones Rahmandoust
شابک: 2-10834-030-3-978, Springer, 2019

■ Characterization of carbon nanotube-based composites under consideration of defects

Moones Rahmandoust,

شاپک: 7-00250-319-3-978, Switzerland, 2016, دانشگاه شهیدبهشتی - تهران

■ Advanced Computational Nanomechanics

Moones Rahmandoust

شاپک: 1119068932, ENGLAND, 2016, دانشگاه شهیدبهشتی - تهران

■ Numerical Nanomechanics of Perfect and defective Heterop-junction CNTs

Ali Ghavamian, Moones Rahmandoust, Andreas Oechsner

شاپک: 8-06893-119-1-978, ENGLAND, 2016, John Wiley and Sons Ltd

Journal Papers

■ Development of various carbon nanoparticles and albumin complexes for potential theranostics applications

Maedeh Yazdani, Moones Rahmandoust, Hasan Kouchakzadeh

JOURNAL OF DRUG DELIVERY SCIENCE AND TECHNOLOGY, Vol.77, 2022

■ Study of the durability and sustainability of fluorescent nanosensors based on cellulose nanocomposites incorporated with various carbon dots

Moones Rahmandoust, Elham Sharifikolouei, Alice Lassnig, Sepideh Zoghi

CELLULOSE, Vol.30, pp. 1031-1044, 2022

■ A novel technique to overcome fluid flow influence in carbon quantum dots/paper-based analytical devices

Sepideh Zoghi, Moones Rahmandoust

Scientific Reports, Vol.12, 2022

■ A highly-sensitive vascular endothelial growth factor-A(165) immunosensor, as a tool for early detection of cancer

Fateme Taati yengeje, Javad Shabani Shayeh, Moones Rahmandoust, Fataneh Fatemi, Sareh Arjmand

JOURNAL OF BIOMEDICAL MATERIALS RESEARCH PART B-APPLIED BIOMATERIALS, Vol.109, pp. 1505-1511, 2021

■ Optimization of the interaction of graphene quantum dots with lipase for biological applications

Asra Mohammadi navareh, Moones Rahmandoust, Fateme Mirzajani, Armin Azadkhah Shalmani, Mohammad Raoufi

JOURNAL OF BIOMEDICAL MATERIALS RESEARCH PART B-APPLIED BIOMATERIALS, Vol.108, pp. 2471-2483, 2020

■ Development of carbon dot-modified polyethersulfone membranes for enhancement of nanofiltration, permeation and antifouling performance

Habib Karimi pour, Afsane Shahbazi, Vahid Vatanpour, Moones Rahmandoust

SEPARATION AND PURIFICATION TECHNOLOGY, Vol.230, 2020

■ Novel antifouling and antibacterial polyethersulfone membrane prepared by embedding nitrogen-doped carbon dots for efficient salt and dye rejection

Habib Koolivand, Afsane Shahbazi, Vahid Vatanpour, Moones Rahmandoust

Materials Science and Engineering C-Materials for Biological Applications, Vol.111, 2020

■ Antibody-modified magnetic nanoparticles as specific high-efficient cell-separation agents

Arezo Saie, Shima Asfia, Hasan Kouchakzadeh, Moones Rahmandoust

JOURNAL OF BIOMEDICAL MATERIALS RESEARCH PART B-APPLIED BIOMATERIALS, Vol.108, pp. 2633-2642, 2020

■ Computational evaluation of the mechanical properties of synthesized graphene quantum dots under consideration of defects

Moones Rahmandoust

Carbon Letters, Vol.30, pp. 1-14, 2020

■ Targeted albumin nanoparticles for the enhancement of gemcitabine toxicity on cancerous cells

Mahsa Mohammadian, Hasan Kouchakzadeh, Moones Rahmandoust, Taher Mohammadian

JOURNAL OF DRUG DELIVERY SCIENCE AND TECHNOLOGY, Vol.56, 2020

■ **Electrochemical study of perlite-barium ferrite/conductive polymer nano composite for super capacitor applications**

Mohammad Sadeghinia, Javad Shabani Shayeh, Fataneh Fatemi, Moones Rahmandoust, Ali Ehsani, Mehran Rezaei
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, Vol.44, pp. 28088-28095, 2019

■ **Effect of Synthesis Temperature on the Electrochemical Properties of Yttrium Aluminum Garnet**

Vahid mansouri, Mostafa Tavirani, Moones Rahmandoust, Javad Shabani Shayeh, Hamid mohammad shiri
Physical Chemistry Research, Vol.7, pp. 775-783, 2019

■ **Obtaining global equations for the Youngs modulus of perfect and defective carbon nanotubes**

Mohammad Mahdi Dehghan Pir, Moones Rahmandoust, Andreas Oechsner
Materials Research Express, Vol.4, 2017

■ **New Insight into the Concept of Carbonization Degree in Synthesis of Carbon Dots to Achieve Facile Smartphone Based Sensing Platform**

Bagheri Zeinab, Ehtesabi Hamide, Moones Rahmandoust, Mohammad Mahdi Ahadian, Zahra Hallaji, Farzane Eskandari, Effat Jokar
Scientific Reports, Vol.7, 2017

■ **Young Modulus Variation of Carbon Nanotubes Due to Defects Associated with Atomic Reconstruction of Random Vacancies**

Moones Rahmandoust, Andreas Oechsner
JOURNAL OF COMPUTATIONAL AND THEORETICAL NANOSCIENCE, Vol.12, pp. 2281-2286, 2015

■ **Buckling Behaviour and Natural Frequency of Zigzag and Armchair Single-Walled Carbon Nanotubes**

Moones Rahmandoust, Andreas Oechsner
Journal of Nano Research, Vol.16, pp. 153-160, 2012

■ **On Finite Element Modeling of Single- and Multi-Walled Carbon Nanotubes**

Moones Rahmandoust, Andreas Oechsner
JOURNAL OF NANOSCIENCE AND NANOTECHNOLOGY, Vol.12, pp. 8129-8136, 2012

■ **Influence of Structural Imperfections and Doping on the Mechanical Properties of Single-Walled Carbon Nanotubes**

Moones Rahmandoust, Andreas Oechsner
Journal of Nano Research, Vol.6, pp. 185-196, 2009

■ **The effect of pH and composition of sulfuricoxalic acid mixture on the self-ordering configuration of high porosity alumina nanohole arrays**

Mohammad Almasi Kashi, A Ramazani, Moones Rahmandoust, M Noormohammadi
JOURNAL OF PHYSICS D-APPLIED PHYSICS, Vol.40, pp. 4625-4630, 2007

■ کاربرد نانوساختارهای کربنی در تشخیص و درمان سرطان پستان

مائه یزدانی، مونس رحمان دوست

دنیای نانو، نسخه ۱۷، صفحات: ۱۶-۲۸، ۱۳۹۹

■ نانولیپوزوم های دارورسان در درمان موثر سرطان پستان

مائه یزدانی، مونس رحمان دوست، حسن کوچک زاده

دنیای نانو، نسخه ۱۶، صفحات: ۲۱-۲۷، ۱۳۹۸

■ نقاط کوانتومی کربنی، پنجره ای به آینده نانوزیست فناوری

آرزو ساعی، مونس رحمان دوست، حسن کوچک زاده

دنیای نانو، نسخه ۱۵، صفحات: ۳۶-۴۷، ۱۳۹۷

Conference Papers

■ **Upcycling Plastic Waste into Carbon Quantum Dots as Potential Molecular Tracking Tags in Healthy and Cancerous Cells**

Fatemeh Karami zarandi, Moones Rahmandoust, Sareh Arjmand

International Conference on Advances in Biotechnology, Chemistry and Life Sciences (ICABCLS - 24), pp.17-17

■

Moones Rahmandoust, Maedeh Yazdani

8th International E-congress on Nanosciences and Nanotechnology (ICNN 2021)

■ **Antibody Modified Magnetic Nanoparticles as a Smart Cell Separation Device**

Shima Asfia, Arezoo Saie, Moones Rahmandoust, Hasan Kouchakzadeh

The first International Iranian Tissue Engineering and Regenerative Medicine Congress

■ **Turn off detection of mercury ions with the use of sensitive and selective fluorescence graphene quantum dot**

Asra Mohammadi navareh, Moones Rahmandoust, Bagheri Zeinab, Ehtesabi Hamide

INN International Conference of Nanotechnology and Nanomedicine, Vol.1, pp.63-64

■ **surface treatment of three-dimensional graphene oxide using ultraviolet radiation**

Farzane Eskandari, Ehtesabi Hamide, Bagheri Zeinab, Seyyed Omid Ranaee Siadat, Moones Rahmandoust

INN International Conference/Workshop of Inter-Islamic Network on Nanotechnology (INN) Nanotechnology and Nanomedicine, pp.46-46

■ **An assessment of the toxicity of carbon dot nanoparticles to Pichia pastoris**

Zahra Hallaji, Bagheri Zeinab, Ehtesabi Hamide, Moones Rahmandoust, Hamin Latifi

INN International Conference/Workshop of Inter-Islamic Network on Nanotechnology (INN) Nanotechnology and Nanomedicine, pp.55-55

■ **Graphene quantum dot-based turn-off sensor for detection of mercury in biological samples**

Ehtesabi Hamide, Bagheri Zeinab, Moones Rahmandoust, zahra Hallaji

3rd PAM International School on Application of Nanomaterials in Medicine

■ **Synthesis of Monodisperse Micrographene Hydrogel Capsules by an Integrated Droplet Microfluidic Device**

Ehtesabi Hamide, Bagheri Zeinab, Ebrahim Behroodi, Moones Rahmandoust, ELHAM AJORLOU, Hamin Latifi, Seyyed Omid Ranaee Siadat

EMBL-Microfluidics 2016, pp.87-87

M.Sc. Theses

■ **Evaluation of the effect of quantum dot doping on induction of apoptosis in MCF7 breast cancer cells**

Soroush Abdorrahimi

2021

■ **Green synthesis of carbon quantum dot from yeast cell wall of saccharomyces cereviciae and use as the fluorescent agent in biological application**

Pardis sadat Mirseyed

2021

■ **carbon - dots based sensor for acetylcholinesterase and its inhibitors detection .**

Niloofar Mahmudi

2021

■ **Acetylcholinestraser biosensor based on carbon quantum dot for directly optical detection of organophosphate pesticide**

Tahereh Shokrlou

2021

■ **optimization of carbon dot and albumin composition as a therapeutic diagnostic element**

Maedeh Yazdani

2021

■ **designing an electrochemical biosensor on nano materilas for early detection of cancer**

Fateme Taati yengeje
2020

■
Nooshin Safari
2019

■
Arezoo Saie
2019

■
Shima Asfia
2019

Awards & Honors

■ سخنران مدعو چهارمین کارگاه بین المللی نقوش هندسی در هنر اسلامی

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