دانشگاه صنعتی امیرکبیر
(پلی تکنیک تهران)

پست الکترونیک:
fshayeganfar@aut.ac.ir

شماره تماس:

h-index (Scopus):
ارجاعات (Scopus):

فرزانه شایگان فر

استادیار
دانشکده فیزیک و مهندسی انرژی
گروه آموزشی فیزیک کاربردی

مقالات ژورنال

داده های ثبت شده در پورتال

1 Mahdi Faghihnasiri, Vahid Najafi, Farzaneh Shayganfar, Ali Ramazani, "First-Principles Study of the Stabilization and Mechanical Properties of Rare-Earth Ferritic Perovskites (RFeO3, R = La, Eu, Gd)", *APPLIED SCIENCES-BASEL*, Vol. 0, Num. 0, Page 0-0, June 2020,

2 Mahdi Faghihnasiri, Javad Beheshtian, Farzaneh Shayganfar, Rouzbeh Shahsavari, "Phase transition and mechanical properties of cesium bismuth silver halide double perovskites (Cs 2 AgBiX 6, X= Cl, Br, I): a DFT approach", *PHYSICAL CHEMISTRY CHEMICAL PHYSICS*, Vol. 22, Num. 1, Page 5959-5968, February 2020,

3 Mehran Amiri, Javad Beheshtian, Farzaneh Shayganfar, Mahdi Faghihnasiri, Rouzbeh Shahsavari, Ali Ramazani, "Electro-Optical Properties of Monolayer and Bilayer Pentagonal BN: First Principles Study", *Nanomaterials*, Vol. 10, Num. 3, Page 1-12, February 2020,

4 Shayan Angizi, Farzaneh Shayganfar, Mahdi Hasanzadehazar, Abdolreza Simchi, "Surface/edge functionalizedboron nitride quantum dots:Spectroscopicfingerprint of bandgapmodification by chemicalfunctionalization", *CERAMICS INTERNATIONAL*, Vol. 46, Num. 1, Page 978-985, September 2019,

5 Farzaneh Shayganfar, Javad Beheshtian, "Interfacial properties of water/heavy water layer encapsulate in bilayer graphene nanochannel and nanocapacitor", *JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS*, Vol. 19, Num. 1547, Page 1-12, May 2019,

6 Farzaneh Shayganfar, Ziba Torkashvand, Kavoos Mirabbaszadeh, Rouzbeh Shahsavari, "Flexoelectric effect in Corrugated Boron Nitride Nanoribbons", *JOURNAL OF ELECTRONIC MATERIALS*, Vol. 3, Num. 0, Page 1-9, April 2019,

7 Farzaneh Shayganfar, Javad Beheshtian, Rouzbeh Shahsavari, "Boron nitride nanochannels encapsulating a water/heavy water layer for energy applications", *RSC Advances*, Vol. 9, Num. 1, Page 5901-5907, February 2019,

8 Farzaneh Shayganfar, Javad Beheshtian, Rouzbeh Shahsavari, "First-Principles Study of Water Nanotubes Captured Inside Carbon/Boron Nitride Nanotubes", *LANGMUIR*, Vol. 34, Num. 37, Page 11176-11187, August 2018,

9 Kavoos Mirabbaszadeh, Ziba Torkashvand, Farzaneh Shayganfar, "Electro/mechanical mutable properties of black phosphorene by electric field and strain engineering", *Materials Research Express*, Vol. 5, Num. 6, Page 1-10, June 2018,

مقالات کنفرانس

داده های ثبت شده در پورتال

1 Javad Beheshtian, Elham Rezyei, Farzaneh Shayganfar, "The sensitivity of Boron Nitride Monolayer toward Biomolecules as Biosensor ", conference of chemistry and nanochemistry, November 2019

2 Sasan Rostami, Somayeh Mohammadi, Bahar Ronnasi, Kavoos Mirabbaszadeh, Zeinab Sanayee, Farzaneh Shayganfar, "SPS-based Synthesis of Ti3C2 MXene nano-sheets suitable for energy storage devices ", The 2th international conference and 5th national conference on new research on electrical and mechanical engineering, May 2019

دروس ارائه شده

#	عنوان درس	توصیف درس	سرفصل ها	دوره درسی
1	Solid State Physics (I)	Revision and consolidation: crystals; * Elastic properties of solids and sound waves; * Fermi surfaces and metals; * Density functional theory; * Semiconductor and semiconductor-based devices; * Optical properties of solids; * Magnetic properties of		Spring 2021
2	Nanostructures-Properties and Applications	The course should give a basic introduction to chemical and physical principles in the synthesis of nanostructured materials. In addition, basic principles of finite size effects will be covered. The course will also cover different methods for synth		Spring 2021
3	General Physics (II)	Introduction to electric and magnetic filed, calculation of electromagnetic field, electromagnetic energy, circuits, electromagnetic induction		Spring 2021
4	General Physics (II)	Introduction to electric and magnetic filed, calculation of electromagnetic field, electromagnetic energy, circuits, electromagnetic induction		Fall 2020
5	General Physics (I)	Introduction to classical mechanics and its application in engineering		Fall 2020
6	Fundamentals of Nanophysics	underestanding of concept of nanostructures and investigation of electronic, optical and mechanical peoperties of nanostructures		Fall 2020
7	Nanostructures-Properties and Applications	The course should give a basic introduction to chemical and physical principles in the synthesis of nanostructured materials. In addition, basic principles of finite size effects will be covered. The course will also cover different methods for synth		Spring 2020
8	General Physics (II)	1. Electric Fields; Coulomb’s Law; Ch. 21, 2. Gauss’s Law – Ch. 22 3. Electric Potential; ch23 4. Capacitance and Capacitors – Ch. 24 5. Electric Current; Resistance and Resistors; Ohm’s Law – Ch. 25 6. Electric Circuits; Kirchhoff’s R		Spring 2020
9	General Physics (II)	Introduction to electric and magnetic filed, calculation of electromagnetic field, electromagnetic energy		Fall 2019
10	Fundamentals of Nanophysics	underestanding of concept of nanostructures and investigation of electronic, optical and mechanical peoperties of nanostructures		Fall 2019