

## Maryam Nazari

### Address:

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### *Educational Background*

**2013-2019**      **Ph.D.** in Applied Chemistry / Razi University / kermanshah/ Iran

**2011-2013**      **M.Sc.** in Applied Chemistry / Razi University / kermanshah/ Iran

**2007-2011**      **B.Sc.** in Applied Chemistry / Razi University / kermanshah/ Iran

### *Research Interests*

- Sensors and Biosensors
- Aptasensors
- Drug delivery
- Electrospinning Nanofibers
- Microfluidic device
- Biofuels
- Biofuel cells
- Biological & Medicinal Chemistry
- Corrosion

## *Research Activities*

**M.Sc. Thesis (2011-2013)** “Laccase immobilization on the electrode surface to design a biosensor for the detection of phenolic compounds such as catechol”, Department of Chemistry/ Razi University / kermanshah/ Iran [Supervisor: Dr. S. Kashanian]

**Ph.D. Thesis (2013-2019)** “Using nanomaterials such as graphene for sensor and biosensor fabrication and drug delivery applications, including anti-cancer drugs”, Department of Chemistry/ Razi University / kermanshah/ Iran [Supervisor: Dr. S. Kashanian]

## *Courses Taught:*

Corrosion of Metals (B.Sc. Chemistry Students)

Food Chemistry and Technology (B.Sc. Chemistry Students)

Principles of Industrial Chemistry Calculations (B.Sc. Chemistry Students)

Introduction to Industrial Chemistry (B.Sc. Chemistry Students)

Chemistry and Technology of Petroleum and Gas (B.Sc. Chemistry Students)

The Chemistry of cosmeticology materials

BSc Research Project

## *Laboratory Skills:*

Spectrofluorimetry, Spectropolarimetry, and other instrumental analysis techniques (UV, FTIR, HPLC)

Electrochemical techniques

Biosynthesis and chemical synthesis of nanoparticles

Immobilization of proteins, aptamers and enzymes onto electrodes

## *Students Graduated:*

M.Sc. Degree

1- Ms. Saba Dabirian (Shared), The corrosion control of Magnesium (AZ31 alloy) implants using electrospinning nanofiber coatings, Razi University, August 25, 2020.

2- Ms. Doaa Jalil Abdosadeh (Shared), Fabrication of phenolic compound biosensor using laccase enzyme and metal-organic coordination polymers. Razi University, September 16, 2020.

3- Ms. Mehrnaz Ghaderpour (Shared), Targeting delivery of letrozole drug using metal organic framework to treat breast cancer, Razi University, September 22, 2021.

5- Ms. Noor Alimurad (Shared), Bilirubin detection by fluorescent nanoprobe such as chitosan nanoparticles containing copper nanocluster and curcumin-based carbon dot, September 22, 2024.

#### Ph.D. Degree

1- Ms. Fatemeh Parnianchi (Shared), Fabrication of electrochemical-based diagnostic sensors to detect biological analytes such as bilirubin in serum and saliva, Razi University, June 1, 2022.

2- Mr. Mosayeb Chaghazardi (Shared), Fabrication of novel recyclable mercury aptasensor based on fluorescence-signaling aptamer and graphene oxide nanosheets, Razi University, September 21, 2023.

3- Ms. Sakineh Hargolzadeh (Shared), Fabrication of a label-free carbohydrate-based electrochemical biosensor to detect Escherichia coli pathogenic bacteria, Razi University, January 27, 2024.

#### ***Current M.Sc. Students:***

1- Setayesh Moradian

2- Ms. Zahra Gholami

3- Ms. Erfan Charvandeh

4- Ms. Asal Naderi

5- Ms. Maryam Najafi

6- Sina Shakibae

7- Mehdi Rostami Gilani

#### ***Current Ph.D. Students:***

1- Ms. Negin Shabani

2- Ms. Atefeh Moradi

3- Ms. Mehrnaz Ghaderpour

### *Patent*

K. Varmira, S. Kashanian, F. Parnianchi, M. Nazari, Construction of bilirubin detection sensor in infants, Construction of bilirubin detection sensor in infants, April 24, 2021.

M. Ghaderpour, M. Nazari, S. Kashanian, Targeted letrozole delivery using a modified metal-organic framework in breast cancer therapy, July 15, 2023.

### *List of Publications:*

1- M. Nazari, S. Kashanian, R. Rafipour, Laccase immobilization on the electrode surface to design a biosensor for the detection of phenolic compounds such as catechol, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* 145 (2015) 130–138.

2- N. Maleki, S. Kashanian, E. Maleki, M. Nazari, A Novel Enzyme Based Biosensor for Catechol Detection in Water Samples Using Artificial Neural Network, *Biochemical Engineering Journal* 128 (2017) 1–11.

3- M. Nazari, S. Kashanian, P. Moradipour, N. Maleki, A novel fabrication of sensor using ZnO-Al<sub>2</sub>O<sub>3</sub> ceramic nanofibers to simultaneously detect catechol and hydroquinone, *Journal of Electroanalytical Chemistry* 812 (2018) 122–131.

4- Fatemeh Parnianchi, M. Nazari, J. Maleki, M. Mohebi, Combination of graphene and graphene oxide with metal and metal oxide nanoparticles in fabrication of electrochemical enzymatic biosensors, *International Nano Letters* 8(4) (2018), 229–239.

5- M. Nazari, S. Kashanian, R. Mohammadi, Electrodeposition of anionic, cationic and nonionic surfactants and gold nanoparticles onto glassy carbon electrode for catechol detection, *Journal of Nanoanalysis*, doi: 10.22034/JNA.2018.575531.1106.

- 6- M. Nazari, S. Kashanian, N. Maleki, N. Shahabadi, Laccase Immobilized onto Graphene oxide Nanosheets and Electrodeposited Gold-Cetyltrimethylammonium bromide complex to fabricate a novel catechol biosensor, *Bulletin of Materials Science*, 42(2) (2019) 42–51.
- 7- S.A.R. Albayaty, S. Kashanian, M. Nazari, S. Rezaei, Fabrication of laccase biosensor to detect phenolic compounds modified by Poly (3, 4-ethylenedioxythiophene) and carbon nanotube, *Bulletin of Materials Science*, 42 (2019) 187, doi: 10.1007/s12034-019-1850-0.
- 8- N. Maleki, S. Kashanian, M. Nazari, N. Shahabadi, A Novel, Highly and Sensitive Laccase Biosensor using Gold Nanoparticles and Poly L-Arginine, to Detect Catechol in Natural Water, *Biotechnology and applied biochemistry*, 66(4) (2019) 502-509.
- 9- M. Govindasamy, G. Boopathy, S.-F. Wang, U. janarthanam, M. Nazari, Facile Synthesis of Tungsten Carbide Nanosheets for Trace Level Detection of Mercury Ions in biological and Contaminated sewage water samples; An Electrocatalytic approach, *Journal of The Electrochemical Society*, 166 (10) (2019), doi: 10.1149/2.0181910jes.
- 10- M. Nazari, S. Kashanian, R. Rafipour, K. Omidfar, A Novel design aptasensor using electroactive label-based aptamer for bisphenol A detection in serum sample, *Journal of Biosciences*, 44(4) (2019) doi: 10.1007/s12038-019-9921-3.
- 11- N. Maleki, S. Kashanian, M. Nazari, N. Shahabadi, A Novel and Enhanced Performance Glucose/O<sub>2</sub> Biofuel Cell, Integrated with Biocompatible Laccase Nanoflower Biocathode and Glucose Dehydrogenase Bioanode with Immobilized NAD<sup>+</sup>, *IEEE Sensors*, 19 (24) (2019) 11988 – 11994.
- 12- S.A. R. Albayati, S. Kashanian, M. Nazari, S. Dabirian, Novel Laccase Immobilization Using Simultaneously Electrodeposition of 3, 4-Ethylenedioxythiophene, Gold Nanoparticles and Functionalized Multi-Walled Carbon Nanotube to Detect Catechol, *Nanochemistry Research*, 5(1), 2020.
- 13- M. Nazari, S. Kashanian, K. Omidfar, S. Ghobadi, H. C. Goicoechea, H. W. Gu, R. Kho-darahmi, A. R. Jalalvand, Two- and three-way chemometric analyses for investigation of inter-actions of acarbose with normal and glycated human serum albumin: Developing a novel bio-sensing system, *Microchemical Journal*, 160, 105675, 2021.
- 14- D. Jalil Abosadeh S. Kashanian, M. Nazari, F. Parnianchi, Fabrication of a novel phenolic compound biosensor using laccase enzyme and metal–organic coordination polymers, *Analytical and Bioanalytical Chemistry Research*, 8(4), Sept. 2021.
- 15- T. Noori, S. Kashanian, R. Rafipour, K. Mansouri, M. Nazari, Dual-targeted drug delivery system based on

dopamine functionalized human serum albumin nanoparticles as a carrier for methyltestosterone drug, *Nanomedicine Journal* 8(2):147-155, 2021.

16- F. Parnianchi, S. Kashanian, M. Nazari, C. Santoro, P. Bollella, and K. Varmira, Highly Selective and Sensitive Molecularly Imprinting Electrochemical Sensing Platform for Bilirubin De-tection in Saliva, *Microchemical Journal*, 168,106367, 2021.

17- Z. Hassanvand, F. Jalali, M. Nazari, F. Parnianchi, C. Santoro, Carbon Nanodots in Electrochemical Sensors and Biosensors: A Review, *ChemElectroChem* 8: 15-35, 2021.

18- S. Dabirian, S. Kashanian, M. Nazari, E. Arkan, The corrosion control of Magnesium (AZ31 alloy) implants using electrospinning nanofiber coatings, *Analytical and Bioanalytical Chemistry Research* 9(2): 191-200, 2021

19- I. Mohammad Jassim, S. Kashanian, M. Nazari, F. Parnianchi, K. M. Mahdi, Novel nanobiosensor design to detect cholic acid using multiwalled carbon nanotube/TiO<sub>2</sub> nanoparticle for 3 $\alpha$ -Hydroxysteroid dehydrogenase immobilization, *Iranian Journal of Chemistry and Chemical Engineering (IJCCE)*. Accepted Manuscript. doi: 10.30492/IJCCE.2021.530922.4755.

20- M. Nazari; S. Kashanian; F. Parnianchi; N. Soltani; N. Maleki, Enzymatic biofuel cells fabricated by nanomaterials and their uses as implantable, wearable, and biosensing devices, *Advances in Nanochemistry* 3(1): 2021.

21- Z. Mohebi, M. Nazari, Phytoremediation of wastewater using aquatic plants, A review, *Journal of Applied Research in Water and Wastewater (JARWW)* 8(1): 50-58, 2021.

22- M. Nazari, Z. Mohebi, Electrochemical biosensors for Atrazine detection as a highly toxic Triazine in wastewater, *Journal of Applied Research in Water and Wastewater (JARWW)* 9(1): 8-15, 2022.

23- F. Parnianchi, S. Kashanian, M. Nazari, M. Peacock, K. Omidfar, K. Varmira, Ultrasensitive electrochemical sensor based on molecular imprinted polymer and ferromagnetic nanocomposite for bilirubin analysis in the saliva and serum of newborns, *Microchemical Journal* 179: 107474, 2022.

24- M. Chaghazardi, S. Kashanian, M. Nazari, K. Omidfar, Y. Joseph, P. Rahimi, Nitrogen and sulfur co-doped carbon quantum dots fluorescence quenching assay for detection of mercury (II), *Spectrochimica Acta Part A Molecular and Biomolecular Spectroscopy* 293: 122448, 2023.

25- S. Hargolzadeh, S. Kashanian, M. Nazari, A label-free carbohydrate-based electrochemical sensor to detect escherichia coli pathogenic bacteria using d-mannose on a glassy carbon electrode, *Biosensors* 13: 619, 2023.

- 26- M. Nazari, S. Kashanian, F. Parnianchi, Z. Hasanvand, M. Mohebbi, Y. Joseph, P. Rahimi, Electrochemical Sensing Based on Nanofibers Modified Electrodes for Application in Diagnostic, Food and Waste Water Samples, *ChemElectroChem*, 11(1): e202300385-e202300404, 2024.
- 27- M. Ghaderpour, S. Kashanian, M. Nazari, M. Motiei, S. Sajadimajd, Targeted letrozole delivery using a modified metal-organic framework in breast cancer therapy, *Journal of Pharmaceutical Sciences, BioNanoScience* 14: 2872-2885, 2024.
- 28- M. Chaghazardi, S. Kashanian, M. Nazari, M. Shariati-Rad, Y. Joseph, P. Rahimi, Mercury (II) sensing using a simple turn-on fluorescent graphene oxide based aptasensor in serum and water sample, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* 313: 124057-,124070, 2024.
- 29- M. Chaghazardi, S. Kashanian, M. Nazari, K. Omidfar, Y. Joseph, P. Rahimi, Fluorometric mercury (II) detection using heteroatom doped carbon and graphene quantum dots, *Analytical Letter, Photonics* 11(9): 841, 2024.
- 30- L. Soltani, K. Varmira, M. Nazari, Comparison of the differentiation of ovine fetal bone-marrow mesenchymal stem cells towards osteocytes on chitosan/alginate/CuO-NPs and chitosan/alginate/FeO-NPs scaffolds, *Scientific Reports*, 14: 1-23, 2024.
- 31- L. Soltani, H. Ghaneialvar, N. Abbasi, P. Bayat, M. Nazari, Chitosan/alginate scaffold enhanced with Berberis vulgaris extract for osteocyte differentiation of ovine fetal stem cells, *Cell Biochemistry and Function*, 43(9): 1-20, 2025.
- 32- A. Moradi, S. Kashanian, M. Nazari, Y. Bahrami, M. Sillanpää, A novel electrochemical biosensor for monitoring and sensitive detection of digoxin in serum samples using a combination of two-dimensional covalent organic framework as supporting materials and a boronate affinity-based surface molecularly imprinted polymer, *Microchemical Journal* 216: 114757-114768, 2025
- 33- S. Sajadimajd, M. Nazari, G. Bahrami; S. H. Madani, Electrospun Gelatin/PCL Nanofibers Containing *Elaeagnus Angustifolia* Extract and *Rosa canina* Isolated Polysaccharide for Burn Wound Healing, *Burns*, under review.
- 34- M. Nazari, A. Zinatizadeh, P. Mohammadi, S. Kashanian, M. Amiri, N. Vali-pour, Y. Joseph, P. Rahimi, Tailoring Carbon Quantum Dots via Precursor Engineering for Fluorescence-Based Biosensing of *E. coli*, *Biosensors*, under revision.
- 35- N. Shaabani, S. Kashanian, M. Nazari, F. Parnianchi, K. Omidfar, M. M. Collinson, Enzyme free electrochemical cholesterol sensor based on carbon paste electrode modified with ionic liquid and molecularly

imprinted polymer, under submission.

36- N. Alimurad, S. Kashanian, M. Nazari, F. Parnianchi, K. Omidfar, Y. Joseph, P. Rahimi, K. T. Jacksonh Biocompatible Carbon Dots from Curcumin for Non-Invasive Fluorescence Detection of Bilirubin in Serum, under submission.

37- M. Ghaderpour, S. Kashanian, M. Nazari, Y. Bahrami, Targeted Liposomal Delivery Systems: A Breakthrough in Pancreatic Cancer treatment, under submission.

38- M. Ghaderpour, S. Kashanian, M. Nazari, S. J.P. McInnes, The potential of nanotechnology for targeted drug delivery to the brain: A novel approach to the treatment of diseases CNS, under submission.

### *List of Papers Presented in National and International Conferences:*

1- M. Nazari, S. Kashanian, R. Rafipour, S. Nazari, Laccase immobilization on the electrode surface to design a biosensor for the detection of phenolic compounds such as catechol, 20th Iranian Conference on Analytical Chemistry, Isfahan University of Technology, Tehran, Iran, March 4-6, 2013.

2- M. Nazari, S. Kashanian, N. Maleki, Electrochemical investigation of catechol at gold nanoparticles-graphene oxide modified glassy carbon electrode, Asian Nano Forum Conference, Kish Island, Iran, March 8-11, 2015.

3- M. Nazari, S. Kashanian, N. Maleki, Electrochemical investigation of catechol at gold nanoparticles-sodium dodecylbenzenesulfonate modified glassy carbon electrode, Asian Nano Forum Conference, Kish Island, Iran, March 8-11, 2015.

4- M. Nazari, S. Kashanian, J. Maleki, Laccase immobilization onto electrode surface using graphene and gold nanoparticles for phenols determination, 2th International Conference on New Research Achievements in Chemistry and Chemical Engineering, AmirKabir University of Technology, Tehran, Iran, May 05, 2016.

5- M. Nazari, S. Kashanian, J. Maleki, Using gold-surfactant nanoparticles for phenols determination, 2th

International Conference on New Research Achievements in Chemistry and Chemical Engineering, AmirKabir University of Technology, Tehran, Iran, May 05, 2016.

6- M. Nazari, S. Kashanian, Using graphene oxide-starch and carbon nanotube for laccase immobilization onto gold electrode to detect hydroquinone, 23th Iranian Conference on Analytical Chemistry, Sharif University of Technology, Tehran, Iran, 31 August-02 September, 2016.

7- M. Nazari, S. Kashanian, S. A. R. Albayaty, Electrochemical detection of catechol using  $\text{Al}_2\text{O}_3$  nanofibers, gold nanoparticles and graphene oxide, 12th Biennial Electrochemistry Seminar, University of Isfahan, Isfahan, Iran, May 3-4, 2017.

8- S. A. R. Albayaty, S. Kashanian, M. Nazari, Using Poly (3, 4-ethylenedioxythiophene) and carbon nanotube for the fabrication of laccase biosensor to detect phenolic compounds, 12th Biennial Electrochemistry Seminar, University of Isfahan, Isfahan, Iran, May 3-4, 2017.

9- M. Nazari, S. Kashanian, Using  $\text{ZnO-Al}_2\text{O}_3$  ceramic nanofibers and graphene oxide to simultaneously detect catechol and hydroquinone, 20th Iranian Chemistry Congress, Ferdowsi University of Mashhad, Mashhad, Iran, July 17-19, 2018.

10- M. Nazari, S. Kashanian, H. Zhaleh, T. Noori, E. Arkan, Nanofibers fabricated from graphene oxide and methotrexate to examine the melanoma cells mortality rate, The 9th national conference on new research in chemical science and engineering, Mazandaran, Iran, April 16, 2020.

11- Bisphenol A, its risks, and its identification using enzymatic biosensor methods and electrochemical aptasensors, 7th National Congress in Chemistry and Chemical Engineering with emphasis on Iranian indigenous technologies, Tehran, Iran, September 20 & 21, 2020.

12- M. Nazari, Using metal oxides in biofuel cells fabrication, 7th National Congress in Chemistry and Chemical Engineering with Emphasis on Iranian Indigenous Technologies, Tehran, Iran, September 20 & 21, 2020.

- 13- M. Nazari, Optical and electrochemical aptasensors for glycosylated human serum albumin, The second international conference on applications of advanced technologies (ICAAT2), Ardabil, Iran, January 27, 2021.
- 14- M. Nazari, Electrochemical aptasensors for detection of salmonella typhimurium, The Second International Conference on Applications of Advanced Technologies (ICAAT2), Ardabil, Iran, January 27, 2021.
- 15- J. D. Abdosadeh, S. Kashanian, M. Nazari, F. Parnianchi, Electrochemical biosensor for detection of hydroquinone in drinking waters using metal-organic coordination polymers, 5th Iranian Applied Chemistry Seminar, Tabriz, Iran, August 31- September 2, 2021.
- 16- F. Parnianchi, S. Kashanian, K. Varmira, M. Nazari, Fabrication of a sensitive and completely selectable molecular template sensor for the measurement of bilirubin in the saliva of infants, 5th Iranian Applied Chemistry Seminar, Tabriz, Iran, August 31- September 2, 2021.
- 17- S. Dabirian, S. Kashanian, M. Nazari, E. Arkan, Corrosion control of (AZ Alloy) Magnesium implants using electrospun nanofiber coatings, 4th national Congress of Chemistry and Nanochemistry from Research to Technology, Tehran, Iran, September 22, 2021.
- 18- M. Ghaderpour, S. Kashanian, M. Nazari, Targeted delivery of letrozole using organo-metallic framework in breast cancer treatment, 4th national Congress of Chemistry and Nanochemistry from Research to Technology, Tehran, Iran, September 22, 2021.
- 19- M. Nazari, Z. Mohebi, Herbal creams as an anti-aging agent for the skin, Medicinal Plants: Mechanization and Processing Congress, Karaj, Iran, February 21-23, 2022.
- 20- Z. Mohebi, M. Nazari, Preparation of herbal dressings for healing and treatment of skin burns, Medicinal Plants: Mechanization and Processing Congress, Karaj, Iran, February 21-23, 2022.
- 21- N. Maleki, M. Nazari, S. Kashanian, Immobilization of Laccase Nanoflower in Polydopamine Biofilm for Biocathode Formation and Its Integration with Glucose Dehydrogenase Bioanode in a Membrane-free of

Glucose/O<sub>2</sub> Biofuel Cell, 5th International Seminar on Polymer Science and Technology, Isfahan, Iran, November 8-10, 2022.

22- M. Chaghazardi, S. Kashanian, M. Nazari, Mercury (II) Detection Using Nitrogen and Sulfur co-doped Carbon Quantum Dots and Fluorescence Quenching Assay, 1<sup>st</sup> International conference & 4<sup>th</sup> National Conference on Laboratory Equipment and Technology, Tehran, Iran, September 11-12, 2023.

#### Research projects:

Number	Persian title	English title	Host institution/university	Approval time	Completion time	Project status
1	ساخت بیوسنسور آنزیمی و نانوصفحات گرافن اکسید برای تشخیص کتکول در نمونه های آب طبیعی	Fabrication of laccase enzymatic biosensor using graphene oxide nano-sheets and PEDOT to detect catechol in natural water	Kermanshah University of Medical Sciences	5/26/2018	11/22/2018	Terminated
2	ساخت بیوسنسور لاکاز اصلاح شده با پلی (۳و۴-اتیلن	Fabrication of laccase biosensor to detect phenolic compounds modified by Poly(3,4-ethylenedioxy-	Kermanshah University of Medical Sciences	11/13/2018	9/9/2019	Terminated

	دی اکسی تیوفن) نانو ذره طلا و نانولوله ی کربنی چند دیواره جهت تشخیص کتکول	thiophene) and carbon nanotube				
3	طراحی یک نانو زیست حسگر به منظور اندازه گیری بیسفنول آ	Designing of a nanobiosensor to measure bisphenol a	Tehran University of Medical Sciences	9/23/2018	9/23/2019	Terminated
4	آماده سازی سنسورهای الکتروشیمیایی جدید اصلاح شده توسط نانوذرات و پلیمرهای مرتبط برای اندازه گیری هایپر بیلوربین در مایعات بدن نوزادان	Preparation of New Electrochemical Sensors Modified by Nanoparticles and Related Polymers to Measure Hyperbilirubin in Body Liquids Newborn Infants	Kermanshah University of Medical Sciences	10/18/2019	10/17/2020	Terminated
5	طراحی و ساخت حسگر الکتروشیمیایی تشخیص عامل زردی در نوزادان در	Design and fabrication of an electrochemical sensor to detect the cause of neonatal jaundice in saliva	Tehran University of Medical Sciences	5/22/2021	9/23/2021	Terminated

	بزاق و سرم	and serum				
6	آنالیزهای کمومتریکس دو و سه گانه برای بررسی برهمکنش های آکاربوز با آلبومین سرم انسانی نرمال و گلیکوزیله : توسعه یک روش زیست حسگری جدید	Two- and three- way chemometric analyses for investigation of interactions of acarbose with normal and glycated human serum albumin Developing a novel biosensing system	Tehran University of Medical Sciences	3/16/2021	10/18/2023	Terminated
7	طراحی و بهینه سازی نانوالیاف الکتروریسی شده پلی کاپرولاکتون عمل آوری شده با عصاره گیاه سنجد و پلی ساکارید استخراج شده از گیاه نسترن وحشی به عنوان زخم پوش: بررسی ویژگی های درون تن و برون تن	Fabrication and optimization of co-administrated Elaeagnus Angustifolia extract and Rosa canina isolated polysaccharide- loaded electrospun polycaprolactone nanofibers as the wound dressing: In vitro and in vivo appraisal	INSF	11/13/2021	-	In progress

8	<p>ساخت یک ایمپدمتریک بیوسنسور الکتروشیمیایی برای شناسایی باکتری اشرشیا اکلاهی مبتنی بر کربوهیدرات با استفاده از الکتروود کربن شیشه ای اصلاح شده با اکسید گرافن و نانو ذرات طلا</p>	<p>Fabrication of a Label-Free electrochemical biosensor carbohydrate-based for detection of Escherichia coli using glassy carbon electrode modified with graphene oxide and gold nanoparticles</p>	<p>Persian Gulf Petrochemical Industries</p>	<p>4/21/2021</p>	<p>3/5/2024</p>	<p>Terminated</p>
9	<p>اندازه گیری غلظت یون جیوه با استفاده از آپتامر و کربن کوانتوم دات و به روش فلورسانس</p>	<p>Determination of mercury ion concentration using aptamer and carbon quantum dot and fluorescence technique</p>	<p>Tehran University of Medical Sciences</p>	<p>8/23/2022</p>	<p>1/12/2024</p>	<p>Terminated</p>
10	<p>طراحی یک بیوسنسور الکتروشیمیایی جدید برای نظارت و تشخیص حساس دیگوکسین در نمونه های سرم</p>	<p>A novel electrochemical biosensor for monitoring and sensitive detection of digoxin in serum samples using a combination of two-dimensional COF as</p>	<p>Kermanshah University of Medical Sciences</p>	<p>4/21/2024</p>	<p>7/30/2025</p>	<p>Terminated</p>

	با استفاده از چارچوب های آلی کووالانسی دو بعدی و یک پلیمر قالب مولکولی سنتز شده بر پایه میل ترکیبی بورونیک اسید	supporting materials and a boronate affinity-based surface molecularly imprinted polymer				
11	نانوذرات ترکیبی هدفمند شده با هیالورونیک اسید جهت ارائه دو داروی شیمی درمانی موثر بر سلول های سرطان پانکراس	Combined nanoparticles targeted with hyaluronic acid to deliver two effective chemotherapy drugs on pancreatic cancer cells	INSF	7/22/2024	-	In progress
12	ساخت بیوسنسور رنگ سنجی بر اساس تکنیک پلیمر قالب مولکولی برای تشخیص و اندازه گیری تتراسایکلین در خون و مواد غذایی	Fabrication of colorimetric biosensor based on molecular imprinted polymer technique for detection and measurement of tetracycline in blood and food	Tehran University of Medical Sciences	3/8/2024	-	In progress
13	حسگر	Enzyme free electrochemical	Tehran University of	9/8/2023	-	In progress

	الکتروشیمیایی بدون آنزیم کلسترویل بر پایه‌ی الکتروود خمیر کربن اصلاح شده با مایع یونی و پلیمر قالب مولکولی	cholesterol sensor based on carbon paste electrode modified with ionic liquid and molecularly imprinted polymer	Medical Sciences			
14	استفاده از نانوپراب های فلورسنت مانند نقاط کربنی مبتنی بر کورکومین و نانوذرات کیتوسان حاوی نانوکلاسترهای مس برای سنجش بیلی روبین	Using fluorescent nanoprobe such as curcumin based carbon dots and chitosan nanoparticles containing copper nanocluster for Bilirubin sensing	Tehran University of Medical Sciences	4/9/2024	-	In progress
15	طراحی سنسور الکتروشیمیایی اندازه گیری کلسترویل مبتنی بر پارچه کربنی اصلاح شده با نانوذرات سولفید مس و پوشش داده	Development of a cholesterol electrochemical sensor utilizing copper sulfide nanoparticle-modified carbon fabric coated with a molecularly imprinted polymer	Tehran University of Medical Sciences	12/1/2024	-	In progress

	شده با پلیمر قالب مولکولی					
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