



# Mehdi Baghayeri, PhD

📍 Sabzevar, IRAN

## Affiliations

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DATE / PLACE OF BIRTH

09/19/1981

Sabzevar, Iran

## 🌐 Languages

English  
Persian

## 📌 Skills

Voltametric systems  
Photocatalysis  
Biosensors  
Nanotechnology  
Drug delivery  
Water treatment  
Food sensor  
Surface coating

## 🎓 Education

Applied Chemistry, Faculty of Chemistry, Tabriz University, Tabriz, Iran

2001 January – 2004 July

**Degree:** B.Sc.

Analytical Chemistry, Faculty of Chemistry, University of Mazandaran, Babolsar, Iran

2004 September – 2007 April

**Degree:** M.Sc.

**Advisor:** Prof. Jahanbakhsh Raof

Analytical Chemistry, Faculty of Chemistry, University of Mazandaran, Babolsar, Iran

2008 September – 2012 April

**Degree:** Ph. D

**Advisor:** Prof. Jahanbakhsh Raof

Interdisciplinary Nanoscience Center (iNANO), Aarhus University, Aarhus, Denmark

2010

**Visiting Scholar**

**Project title:** Neurotransmitter research

**Advisor:** Prof. Elena Ferapontova

## 📁 Employment history

Research in the chemistry and biochemistry laboratory of Water and Wastewater Administration for study on the causes of increasing pollution of the underground water resources of Sabzevar city, Sabzevar, Iran.

June 2006 – August 2007

Instructor, University of Golestan, Gorgan, Iran. Course: Analytical Chemistry (I), Organic Chemistry, Inorganic Chemistry, General Chemistry.

September 2009 – June 2010

Faculty member as Assistant Prof. in Hakim Sabzevari University, Sabzevar, Iran.

April 2012 – May 2017

Faculty member as Associate Prof. in Hakim Sabzevari University, Sabzevar, Iran.

May 2017 – present

Dean of Faculty of Science, Hakim Sabzevari university, Sabzevar, Iran.

December 2021 – present.

## RESEARCH INTERESTS

Electrochemical sensors and biosensors

Nano-biosensors

Photo-electrocatalysis

Material Science and Surface chemistry

Conductive polymer-based nanocomposites

Wastewater Treatment

Environmental Chemistry

## HONORS & AWARDS

- Top Researcher Faculty of Science, Hakim Sabzevari University and received a research fund of 1.500.000.000 Iranian Rials for the year 2022.
- Highly Cited Researchers; according to Clarivate Analytics 2023.
- Being on the among World's Top 1% Scientists List created by Web of Science. (2021)
- 2021 Being on the among World's Top 2% Scientists List created by Stanford University (2021)
- Being on the among World's Top 2% Scientists List created by Stanford University and released on 16th October 2020 in the journal PLOS. (2020)
- Honor researcher at Hakim Sabzevari University (2015)

## PUBLICATIONS

2023

126. Jin, X., Nodehi, M., Baghayeri, M., Xu, Y., Hua, Z., Lei, Y., Shao, M., Makvandi, P. 2023. Development of an impedimetric sensor for susceptible detection of melatonin at picomolar concentrations in diverse pharmaceutical and human specimens, *Environmental Research* 238, 117080. <https://doi.org/10.1016/j.envres.2023.117080>.

125. Yan, K., Yan, L., Kuang, W., Kaffash, A., Mahdavi, B., Baghayeri, M., Liu, W. 2023. Novel biosynthesis of gold nanoparticles for multifunctional applications: Electrochemical detection of hydrazine and treatment of gastric cancer, *Environmental Research* 238, 117081. <https://doi.org/10.1016/j.envres.2023.117081>.

124. Bi, L., Teng, Y., Baghayeri, M., Bao, J. 2023. Employing Pd nanoparticles decorated on halloysite nanotube/carbon composite for electrochemical aptasensing of HER2 in breast cancer patients, *Environmental Research* 237, 117030. <https://doi.org/10.1016/j.envres.2023.117030>.

123. Jin, X., Baghayeri, M., Nodehi, M., Koshki, M.-S., Ramezani, A., Fayazi, M., Xu, Y., Hua, Z., Lei, Y., Makvandi, P. 2023. Evaluation of thallium ion as an effective ion in human health using an electrochemical sensor, *Environmental Research* 238, 117026. <https://doi.org/10.1016/j.envres.2023.117026>.

122. Karimi-Maleh, H., Ghalkhani, M., Saberi Dehkordi, Z., Singh, J., Wen, Y., Baghayeri, M., Rouhi, J., Fu, L., Rajendran, S. 2023. MOF-enabled pesticides as developing approach for sustainable agriculture and reducing environmental hazards, *Journal of Industrial and Engineering Chemistry*. In Press. <https://doi.org/10.1016/j.jiec.2023.08.044>.

121. You, J., Li, J., Wang, Z., Baghayeri, M., Zhang, H. 2023. Application of Co<sub>3</sub>O<sub>4</sub> nanocrystal/rGO for simultaneous electrochemical detection of cadmium and lead in environmental waters, *Chemosphere* 335, 139133. <https://doi.org/10.1016/j.chemosphere.2023.139133>.

120. Liu, H., Baghayeri, M., Amiri, A., Karimabadi, F., Nodehi, M., Fayazi, M., Maleki, B., Nazarzadeh Zare, E., Kaffash, A. 2023. A strategy for As (III) determination based on ultrafine gold nanoparticles decorated on magnetic graphene oxide, *Environmental Research* 231, 116177. <https://doi.org/10.1016/j.envres.2023.116177>.

119. Karimi-Maleh, H., Darabi, R., Baghayeri, M., Karimi, F., Fu, L., Rouhi, J., Elena Niculina, D., Gündüz, E. S., Dragoi, E.N. 2023. Recent developments in carbon nanomaterials-based electrochemical sensors for methyl parathion detection, *Journal of Food Measurement and Characterization*. <https://doi.org/10.1007/s11694-023-02050-z>.

118. Chahkandi, M., Jawaria, R., Khalid, M., Tahir, M. N., Naseer, M. M., Zargazi, M. H., Shafiq, Z., Baghayeri, M. 2023. Comprehensive Structural Studies of Molecules and Crystalline Networks of New Ferrocene-Based Thiosemicarbazones, *Inorganic Chemistry Communications* 155, 111051. <https://doi.org/10.1016/j.inoche.2023.111051>.

117. Li, J., Mahdavi, B., Baghayeri, M., Rivandi, B., Lotfi, M., Zangeneh, M. M., Zangeneh, A., Tayebee, R. 2023. A new formulation of Ni/Zn bi-metallic nanocomposite and evaluation of its applications for pollution removal, photocatalytic, electrochemical sensing, and anti-breast cancer, *Environmental Research* 233, 116462. <https://doi.org/10.1016/j.envres.2023.116462>.

116. Akin, M., Bayat, R., Bekmezci, M., Kazel Coguplugil, Z., Sen, F., Baghayeri, M., Kaffash, A., Tehranejad-Javazmi, F., Sheikhsheoie, I. 2023. The use of polymer/carbon based material as an efficient and low-cost electrochemical sensor for rapid electrochemical detection of dopamine, *Carbon Letters*. <https://doi.org/10.1007/s42823-023-00537-9>.

115. Karimi-Maleh, H., Liu, Y., Li, Z., Darabi, R., Orooji, Y., Karaman, C., Karimi, F., Baghayeri, M., Rouhi, J., Fu, L., Rostamnia, S., Rajendran S., Sanati. A.L., Sadeghifar, H., Ghalkhani, M. 2023. Calf thymus ds-DNA intercalation with pendimethalin herbicide at the surface of ZIF-8/Co/rGO/C3N4/ds-DNA/SPCE; A bio-sensing approach for pendimethalin quantification confirmed by molecular docking study, *Chemosphere*. 332, 138815. (Hot paper) and (Highly cited paper)

114. Ermis, N., Zare, N., Darabi, R., Alizadeh, M., Karimi, F., Singh, J., Shahidi, S.-A., Dragoi, E. N., Camarada, M.B., Baghayeri, M. 2023. Recent advantage in electrochemical monitoring of gallic acid and kojic acid: a new perspective in food science, *Journal of Food Measurement and Characterization*. <https://doi.org/10.1007/s11694-023-01881-0>. (Hot paper) and (Highly cited paper)

113. Karimi-Maleh, H., Darabi, R., Karimi, F., Karaman, C., Shahidi, S.A., Zare, N., Baghayeri, M., Fu, L., Rostamnia, S., Rouhi, J., Rajendran, S. 2023. State-of-art advances on removal, degradation and electrochemical monitoring of 4-aminophenol pollutants in real samples: A review. *Environmental Research* 222, 115338. (Hot paper) and (Highly cited paper)

112. Amiri, A., Baghayeri, M., Shahabizadeh, M. 2023. Polypyrrole/carbon nanotube coated stainless steel mesh as a novel sorbent, *New Journal of Chemistry* 47, 4402-4408.

111. Khademi, D., Zargazi, M., Chahkandi, M., Baghayeri, M. 2023. A novel  $\gamma$ -BMO@BMO Z-Scheme heterojunction for promotion photocatalytic performance: Nanofibers thin film by Co-axial-electrospun, *Environmental Research* 219, 115154.

110. Sun, W., Hong, Y., Li, T., Chu, H., Liu, J., Feng, L., Baghayeri, M. 2023. Biogenic synthesis of reduced graphene oxide decorated with silver nanoparticles (rGO/AgNPs) using table olive (*olea europaea*) for efficient and rapid catalytic reduction of organic pollutants. *Chemosphere* 310, 136759.

109. Mehrkhan, R., Mohammadi, M., Zenhari, A., Baghayeri, M., Roknabadi, M.R. 2023. Antibacterial Evaporator Based on Wood-Reduced Graphene Oxide/Titanium Oxide Nanocomposite for Long-Term and Highly Efficient Solar-Driven Wastewater Treatment. *Industrial & Engineering Chemistry Research*. 62, 11, 4573-4586. <https://doi.org/10.1021/acs.iecr.2c02528>.

## 2022

108. Amiri, A., Baghayeri, M., Koshki, M.-S. 2022. Electrochemical deposition of polyaniline on the stainless steel mesh for the extraction of polycyclic aromatic hydrocarbons. *Microchemical Journal* 173, 107014.

107. Baghayeri, M., Nabavi, S., Hasheminejad, E., Ebrahimi, V. 2022. Introducing an electrochemical sensor based on two layers of ag nanoparticles decorated graphene for rapid determination of methadone in human blood serum. *Topics in Catalysis* 65(5), 623-632.

106. Ghanei-Motlagh, M., Baghayeri, M., 2022. Application of N, S-dual-doped carbon/sepiolite clay hybrid material for electrochemical detection of mercury(II) in water resources. *Materials Chemistry and Physics* 285, 126127.

105. Islam, F., Islam, M.M., Meem, A.F.K., Nafady, M.H., Islam, M.R., Akter, A., Mitra, S., Alhumaydhi, F.A., Emran, T.B., Khusro, A., 2022. Multifaceted role of polyphenols in the treatment and management of neurodegenerative diseases. *Chemosphere* 307, 136020.

104. Karimi-Maleh, H., Beitollahi, H., Kumar, P.S., Tajik, S., Jahani, P.M., Karimi, F., Karaman, C., Vasseghian, Y., Baghayeri, M., Rouhi, J., 2022. Recent advances in carbon nanomaterials-based electrochemical sensors for food azo dyes detection. *Food and Chemical Toxicology*, 112961. (Hot paper) and (Highly cited paper)

103. Karimi-Maleh, H., Darabi, R., Shabani-Nooshabadi, M., Baghayeri, M., Karimi, F., Rouhi, J., Alizadeh, M., Karaman, O., Vasseghian, Y., Karaman, C., 2022. Determination of D&C Red 33 and Patent Blue V Azo dyes using an impressive electrochemical sensor based on carbon paste

electrode modified with ZIF-8/gC<sub>3</sub>N<sub>4</sub>/Co and ionic liquid in mouthwash and toothpaste as real samples. *Food and Chemical Toxicology* 162, 112907. (Hot paper) and (Highly cited paper)

102. Karimi-Maleh, H., Karaman, C., Karaman, O., Karimi, F., Vasseghian, Y., Fu, L., Baghayeri, M., Rouhi, J., Senthil Kumar, P., Show, P.-L., 2022. Nanochemistry approach for the fabrication of Fe and N codecorated biomass-derived activated carbon frameworks: a promising oxygen reduction reaction electrocatalyst in neutral media. *Journal of Nanostructure in Chemistry*, 1-11. (Hot paper) and (Highly cited paper)

101. Karimi-Maleh, H., Khataee, A., Karimi, F., Baghayeri, M., Fu, L., Rouhi, J., Karaman, C., Karaman, O., Boukherroub, R., 2022. A green and sensitive guanine-based DNA biosensor for idarubicin anticancer monitoring in biological samples: A simple and fast strategy for control of health quality in chemotherapy procedure confirmed by docking investigation. *Chemosphere* 291, 132928. (Hot paper) and (Highly cited paper)

100. Khorsandi, D., Zarepour, A., Rezazadeh, I., Ghomi, M., Ghanbari, R., Zarrabi, A., Esfahani, F.T., Mojahed, N., Baghayeri, M., Zare, E.N., 2022. Ionic liquid-based materials for electrochemical biosensing. *Clinical and Translational Discovery* 2(3), e127.

99. Koushki, E., Turkchouran, N., Ghasedi, A., Baghayeri, M., 2022. Electrochemical synthesis of snowflake like brass nanorod structures. *Journal of Materials Science: Materials in Electronics*, 33, 26236–26242.

98. Nodehi, M., Baghayeri, M., Kaffash, A., 2022. Application of BiNPs/MWCNTs-PDA/GC sensor to measurement of Tl(I) and Pb(II) using stripping voltammetry. *Chemosphere* 301, 134701. (Highly cited paper)

97. Zargazi, M., Chahkandi, M., Baghayeri, M., 2022. New highly efficient 2D/1D HAp/g-C<sub>3</sub>N<sub>4</sub> photocatalyst thin film insight into crystal orientation and C-vacancy effects. *Chemosphere* 303(2), 135079.

## 2021

96. Baghayeri, M., Amiri, A., Fayazi, M., Nodehi, M., Esmaeelnia, A., 2021. Electrochemical detection of bisphenol a on a MWCNTs/CuFe<sub>2</sub>O<sub>4</sub> nanocomposite modified glassy carbon electrode. *Materials Chemistry and Physics* 261, 124247.

95. Baghayeri, M., Amiri, A., Karimabadi, F., Di Masi, S., Maleki, B., Adibian, F., Pourali, A.R., Malitesta, C., 2021. Magnetic MWCNTs-dendrimer: A potential modifier for electrochemical evaluation of As(III) ions in real water samples. *Journal of Electroanalytical Chemistry* 888, 115059.

94. Karimi-Maleh, H., Alizadeh, M., Orooji, Y., Karimi, F., Baghayeri, M., Rouhi, J., Tajik, S., Beitollahi, H., Agarwal, S., Gupta, V.K., 2021. Guanine-based DNA biosensor amplified with Pt/SWCNTs nanocomposite as analytical tool for nanomolar determination of daunorubicin as an anticancer drug: a docking/experimental investigation. *Industrial & Engineering Chemistry Research* 60(2), 816-823. (Highly cited paper)

93. Karimi-Maleh, H., Orooji, Y., Karimi, F., Alizadeh, M., Baghayeri, M., Rouhi, J., Tajik, S., Beitollahi, H., Agarwal, S., Gupta, V.K., 2021. A critical review on the use of potentiometric based biosensors for biomarkers detection. *Biosensors and Bioelectronics* 184, 113252. (Highly cited paper)

92. Karimi-Maleh, H., Yola, M.L., Atar, N., Orooji, Y., Karimi, F., Kumar, P.S., Rouhi, J., Baghayeri, M., 2021. A novel detection method for organophosphorus insecticide fenamiphos: Molecularly imprinted electrochemical sensor based on core-shell Co<sub>3</sub>O<sub>4</sub>@MOF-74 nanocomposite. *Journal of colloid and interface science* 592, 174-185. (Highly cited paper)

91. Koshki, M.-S., Baghayeri, M., Fayazi, M., 2021. Application of sepiolite/FeS<sub>2</sub> nanocomposite for highly selective detection of mercury(II) based on stripping voltammetric analysis. *Journal of Food Measurement and Characterization* 15(6), 5318-5325.

90. Mahdavi, B., Paydarfard, S., Rezaei-Seresht, E., Baghayeri, M., Nodehi, M., 2021. Green synthesis of NiONPs using *Trigonella subenervis* extract and its applications as a highly efficient electrochemical sensor, catalyst, and antibacterial agent. *Applied Organometallic Chemistry* 35(8), e6264.

89. Nodehi, M., Baghayeri, M., Behazin, R., Veisi, H., 2021. Electrochemical aptasensor of bisphenol A constructed based on 3D mesoporous structural SBA-15-Met with a thin layer of gold nanoparticles. *Microchemical Journal* 162, 105825.

88. Nodehi, M., Baghayeri, M., Veisi, H., 2021. Preparation of GO/Fe<sub>3</sub>O<sub>4</sub>@ PMDA/AuNPs nanocomposite for simultaneous determination of As<sup>3+</sup> and Cu<sup>2+</sup> by stripping voltammetry. *Talanta* 230, 122288.

87. Orooji, Y., Asrami, P.N., Beitollahi, H., Tajik, S., Alizadeh, M., Salmanpour, S., Baghayeri, M., Rouhi, J., Sanati, A.L., Karimi, F., 2021. An electrochemical strategy for toxic ractopamine sensing in pork samples; twofold amplified nano-based structure analytical tool. *Journal of Food Measurement and Characterization* 15(5), 4098-4104. (Highly cited paper)

## 2020

86. Adibian, F., Pourali, A.R., Maleki, B., Baghayeri, M., Amiri, A., 2020. One-pot synthesis of dihydro-1H-indeno [1,2-b] pyridines and tetrahydrobenzo [b] pyran derivatives using a new and efficient nanocomposite catalyst based on N-butylsulfonate-functionalized MMWCNTs-D-NH<sub>2</sub>. *Polyhedron* 175, 114179.

85. Amiri, A., Baghayeri, M., Karimabadi, F., Ghaemi, F., Maleki, B., 2020. Graphene oxide/polydimethylsiloxane-coated stainless steel mesh for use in solid-phase extraction cartridges and extraction of polycyclic aromatic hydrocarbons. *Microchimica Acta* 187(4), 1-8.

84. Amiri, A., Baghayeri, M., Vahdati-Nasab, N., 2020. Effective extraction of organophosphorus pesticides using sol-gel based coated stainless steel mesh as novel solid-phase extraction sorbent. *Journal of Chromatography A* 1620, 461020.

83. Baghayeri, M., Amiri, A., Moghaddam, B.S., Nodehi, M., 2020. Cu-Based MOF for simultaneous determination of trace Tl(I) and Hg(II) by stripping voltammetry. *Journal of the Electrochemical Society* 167(16), 167522.

82. Baghayeri, M., Ghanei-Motlagh, M., Tayebee, R., Fayazi, M., Narenji, F., 2020. Application of graphene/zinc-based metal-organic framework nanocomposite for electrochemical sensing of As (III) in water resources. *Analytica chimica acta* 1099, 60-67. (Highly cited paper)

81. Baghayeri, M., Nodehi, M., Amiri, A., Amirzadeh, N., Behazin, R., Iqbal, M.Z., 2020. Electrode designed with a nanocomposite film of CuO Honeycombs/Ag nanoparticles electrogenerated on a magnetic platform as an amperometric glucose sensor. *Analytica chimica acta* 1111, 49-59.

80. Ghanei-Motlagh, M., Baghayeri, M., 2020. Determination of trace Tl(I) by differential pulse anodic stripping voltammetry using a novel modified carbon paste electrode. *Journal of The Electrochemical Society* 167(6), 066508.

79. Iqbal, M.Z., Haider, S.S., Siddique, S., Karim, M.R.A., Zakar, S., Tayyab, M., Faisal, M.M., Sulman, M., Khan, A., Baghayeri, M., 2020. Capacitive and diffusion-controlled mechanism of strontium oxide based symmetric and asymmetric devices. *Journal of Energy Storage* 27, 101056.

78. Nodehi, M., Baghayeri, M., Ansari, R., Veisi, H., 2020. Electrochemical quantification of 17 $\alpha$ -Ethinylestradiol in biological samples using a Au/Fe<sub>3</sub>O<sub>4</sub>@ TA/MWNT/GCE sensor. *Materials Chemistry and Physics* 244, 122687.

## 2019

77. Riahimanesh, F., Alahabadi, A., Baghayeri, M., Maleki, B., Miri, M., 2019. Investigation on the removal of entacapone from contaminated water using magnetic activated carbon. *Materials Research Express* 6(9), 096105.

76. Rouhi, M., Lakouraj, M.M., Baghayeri, M., 2019. Low band gap conductive copolymer of thiophene with p-phenylenediamine and its magnetic nanocomposite: Synthesis, characterization and biosensing activity. *Polymer Composites* 40(3), 1034-1042.

75. Tayebee, R., Fattahi Abdizadeh, M., Erfaninia, N., Amiri, A., Baghayeri, M., Kakhki, R.M., Maleki, B., Esmaili, E., 2019. Phosphotungstic acid grafted zeolite imidazolate framework as an effective heterogeneous nanocatalyst for the one-pot solvent-free synthesis of 3,4-dihydropyrimidinones. *Applied Organometallic Chemistry* 33(8), e4959.

74. Baghayeri, M., Alinezhad, H., Fayazi, M., Tarahomi, M., Ghanei-Motlagh, R., Maleki, B., 2019. A novel electrochemical sensor based on a glassy carbon electrode modified with dendrimer functionalized magnetic graphene oxide for simultaneous determination of trace Pb(II) and Cd(II). *Electrochimica Acta* 312, 80-88.

73. Baghayeri, M., Alinezhad, H., Tarahomi, M., Fayazi, M., Ghanei-Motlagh, M., Maleki, B., 2019. A nonenzymatic hydrogen peroxide sensor based on dendrimer functionalized magnetic graphene oxide decorated with palladium nanoparticles. *Applied Surface Science* 478, 87-93.

72. Baghayeri, M., Amiri, A., Razghandi, H., 2019. Employment of Pd nanoparticles at the structure of poly aminohippuric acid as a nanocomposite for hydrogen peroxide detection. *Journal of Electroanalytical Chemistry* 832, 142-151.

71. Baghayeri, M., Nodehi, M., Veisi, H., Tehrani, M.B., Maleki, B., Mehmandost, M., 2019. The role of pramipexole functionalized MWCNTs to the fabrication of Pd nanoparticles modified GCE for electrochemical detection of dopamine. *DARU Journal of Pharmaceutical Sciences* 27(2), 593-603.

70. Ghanei-Motlagh, M., Taher, M.A., Fayazi, M., Baghayeri, M., Hosseiniifar, A., 2019. Non-enzymatic amperometric sensing of hydrogen peroxide based on vanadium pentoxide nanostructures. *Journal of The Electrochemical Society* 166(6), B367.

69. Maleki, B., Baghayeri, M., Ghanei-Motlagh, M., Zonoz, F.M., Amiri, A., Hajizadeh, F., Hosseiniifar, A., Esmailnezhad, E., 2019. Polyamidoamine dendrimer functionalized iron oxide nanoparticles for simultaneous electrochemical detection of Pb<sup>2+</sup> and Cd<sup>2+</sup> ions in environmental waters. *Measurement* 140, 81-88.

68. Maleki, B., Barakchi Tabrizy, F., Tayebee, R., Baghayeri, M., 2019. Oxidative Aromatization of 1,3,5-Trisubstituted 2-Pyrazolines Using Oxalic Acid/Sodium Nitrite System. *Polycyclic Aromatic Compounds* 39(2), 93-98.

## 2018

67. Targhoo, A., Amiri, A., Baghayeri, M., 2018. Magnetic nanoparticles coated with poly (pphenylenediamine-co-thiophene) as a sorbent for preconcentration of organophosphorus pesticides. *Microchimica Acta* 185(1), 1-8.

66. Amiri, A., Baghayeri, M., Hamidi, E., 2018. Poly (pyrrole-co-aniline)@graphene oxide/Fe<sub>3</sub>O<sub>4</sub> sorbent for the extraction and preconcentration of polycyclic aromatic hydrocarbons from water samples. *New Journal of Chemistry* 42(20), 16744-16751.

65. Amiri, A., Baghayeri, M., Sedighi, M., 2018. Magnetic solid-phase extraction of polycyclic aromatic hydrocarbons using a graphene oxide/Fe<sub>3</sub>O<sub>4</sub>@polystyrene nanocomposite. *Microchimica Acta* 185(8), 1-9.

64. Baghayeri, M., Amiri, A., Alizadeh, Z., Veisi, H., Hasheminejad, E., 2018. Non-enzymatic voltammetric glucose sensor made of ternary NiO/Fe<sub>3</sub>O<sub>4</sub>-SH/para-amino hippuric acid nanocomposite. *Journal of Electroanalytical Chemistry* 810, 69-77.
63. Baghayeri, M., Amiri, A., Hasheminejad, E., Mahdavi, B., 2018. Poly (aminohippuric acid)–sodium dodecyl sulfate/functionalized graphene oxide nanocomposite for amplified electrochemical sensing of gallic acid. *Journal of the Iranian Chemical Society* 15(9), 1931-1938.
62. Baghayeri, M., Amiri, A., Maleki, B., Alizadeh, Z., Reiser, O., 2018. A simple approach for simultaneous detection of cadmium(II) and lead(II) based on glutathione coated magnetic nanoparticles as a highly selective electrochemical probe. *Sensors and Actuators B: Chemical* 273, 1442-1450.
61. Baghayeri, M., Ansari, R., Nodehi, M., Razavipanah, I., Veisi, H., 2018. Label-free electrochemical bisphenol A aptasensor based on designing and fabrication of a magnetic gold nanocomposite. *Electroanalysis* 30(9), 2160-2166.
60. Baghayeri, M., Ansari, R., Nodehi, M., Razavipanah, I., Veisi, H., 2018. Voltammetric aptasensor for bisphenol A based on the use of a MWCNT/Fe<sub>3</sub>O<sub>4</sub>@ gold nanocomposite. *Microchimica Acta* 185(7), 1-9.
59. Baghayeri, M., Ansari, R., Nodehi, M., Veisi, H., 2018. Designing and fabrication of a novel gold nanocomposite structure: application in electrochemical sensing of bisphenol A. *International Journal of Environmental Analytical Chemistry* 98(9), 874-888.
58. Baghayeri, M., Beitollahi, H., Akbari, A., Farhadi, S., 2018. Highly sensitive nanostructured electrochemical sensor based on carbon nanotubes-Pt nanoparticles paste electrode for simultaneous determination of levodopa and tyramine. *Russian Journal of Electrochemistry* 54(3), 292-301.
57. Baghayeri, M., Mahdavi, B., Hosseinpor-Mohsen Abadi, Z., Farhadi, S., 2018. Green synthesis of silver nanoparticles using water extract of *Salvia leriifolia*: Antibacterial studies and applications as catalysts in the electrochemical detection of nitrite. *Applied Organometallic Chemistry* 32(2), e4057.
56. Baghayeri, M., Veisi, H., Farhadi, S., Beitollahi, H., Maleki, B., 2018. Ag nanoparticles decorated Fe<sub>3</sub>O<sub>4</sub>/chitosan nanocomposite: synthesis, characterization and application toward electrochemical sensing of hydrogen peroxide. *Journal of the Iranian Chemical Society* 15(5), 1015-1022.
55. Bashtani, E., Amiri, A., Baghayeri, M., 2018. A nanocomposite consisting of poly (methyl methacrylate), graphene oxide and Fe<sub>3</sub>O<sub>4</sub> nanoparticles as a sorbent for magnetic solid-phase extraction of aromatic amines. *Microchimica Acta* 185(1), 1-8.
54. Hemmati, S., Baghayeri, M., Kazemi, S., Veisi, H., 2018. Biosynthesis of silver nanoparticles using oak leaf extract and their application for electrochemical sensing of hydrogen peroxide. *Applied Organometallic Chemistry* 32(11), e4537.
53. Maleki, B., Ayazi Jannat Abadi, S., Baghayeri, M., Rahnamaye Aliabad, H.A., Veisi, H., 2018. One-pot and three-component of tetrahydrobenzo[b]pyran derivatives using heterogeneous and recyclable catalysts and its application toward silver nanoparticle synthesis. *Applied Chemistry* 13(48), 209-230.

## 2017

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5. Raof, J.B., Ojani, R., Baghayeri, M., 2011. Sensitive Voltammetric Determination of Captopril Using a Carbon Paste Electrode Modified with Nano-TiO<sub>2</sub>/Ferrocene Carboxylic Acid. *Chinese Journal of Catalysis* 32(11), 1685-1692.

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4. Raof, J.B., Golikand, A.N., Baghayeri, M., 2010. A study of the electrocatalytic oxidation of methanol on a nickel-salophen-modified glassy carbon electrode. *Journal of Solid State Electrochemistry* 14(5), 817-822.

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## ■ EDITORIALS

1. Materials Chemistry Horizons, Editor of Analytical Chemistry Section, 2022- Present

## ■ COURSES (Selected)

- General Chemistry
- Introduction to electrochemistry: Interpreting Electrochemistry. Electrochemical methods: Voltammetry Electrochemical methods: Amperometry; Differential Methods; Impedance Nano-electrochemical approaches. Nanobioelectrochemistry
- Electrochemical methods, fundamentals and applications: Electrochemistry of biomolecules; Electrocatalysis; Photoelectrochemistry; Nanoparticle systems for sensing and biosensing
- Analytical Chemistry (I) , (II), and (III)
- Advanced Analytical Chemistry
- Synthesis method for nanomaterials
- Laboratory of Analytical chemistry

## 🏠 Projects as Supervisor:

1. 2019-2021 (Research project) Title: Fabrication of electrochemical sensors based on carbon nanostructures and selective organic ligands for the determination of thallium and mercury heavy metal ions in environmental waters, Project Supported by National Science Foundation (INSF, **Grant No.** 98000409)
2. (July 2018 – July 2019) Development of a Novel Electrochemical Sensor Based on Pramipexole Functionalized Carbon Nanotubes and Palladium Nanoparticles for Dopamine Detection, Project Supported by Organization of Research and Technology at HSU (**Grant No.** 14748)
3. (December 2013 – December 2014) Electrochemical Study of Hemoglobin Immobilized on Polyfuran/Magnetic Iron Composite Modified Carbon Paste Electrode for Hydrogen Peroxide Detection, Project Supported by Organization of Research and Technology at HSU (**Grant No.** 92/33862)
4. (October 2013 – October 2014) Simultaneous Measurement of Phenobarbital and Droxidopa as Two Effective Drugs in the Treatment of Epilepsy Using Graphene and Platinum Nanoparticles Modified Electrode, Project Supported by Organization of Research and Technology at HSU (**Grant No.** 92D/33861)