

Curriculum Vitae



Personal

Name: Balal		Family name: Khalilzadeh	
Date of Birth: February 20, 1982	Place of Birth: Khoy	Nationality: Iranian	Marital status: Married, one child
Home Address: No. 404, 4 th floor, Second block, Shahid Motahari Building, Corner of Mehregan 9 alley, Between Golbad street and Abresan junction, Tabriz, Iran.			
Phone Numbers: +98-9125601008		E-Mail Address: khalilzadehb@tbzmed.ac.ir , balalkhalilzadeh@gmail.com	

Education

School	Degree	Major	Years of graduation
Tabriz University of Medical Sciences	Ph.D	Medical Nanotechnology	2016

Employment History

Employer	Years		Section	Job Title
	From	To		
Tabriz University of Medical Sciences	2016	now	Stem Cell Research Center (SCRC)	Academic member
Iran Polymer and Petrochemical Institute (IPPI)	2010	2012	Polymer Engineering	Catalyst Support Researcher
NPC-RT (Tehran Center)	2007	2009	Catalyst	Catalyst Researcher

Industrial Projects:

- 1- Preparation of gel like support used for synthesis of Ziegler-Natta catalyst (NPC-RT, Tehran center).
- 2- Use of Aluminum compounds for synthesis of catalyst for ethylene polymerization (NPC-RT, Tehran center).
- 3- Investigation of possibility of synthesis of new catalyst for ethylene polymerization (NPC-RT, Tehran center).
- 4- Preparation of magnesium ethoxide as support for synthesis of Ziegler-Natta catalyst (IPPI)

Publications

Google Scholar ID

Journal Paper:

- 1) Zahra Karimzadeh, **Balal Khalilzadeh** and et al, [*Multiplex bioassaying of cancer proteins and biomacromolecules: Nanotechnological, structural and technical perspectives*](#) International Journal of Biological Macromolecules (2020) . **(Impact factor: 5.162)**
- 2) Salimeh Chenaghlo, **Balal Khalilzadeh** and et al, [*Gold nanostar-enhanced electrochemiluminescence immunosensor for highly sensitive detection of cancer stem cells using CD133 membrane biomarker*](#) Bioelectrochemistry 137 (2021) 107633. **(Impact factor: 4.722)**
- 3) Farzaneh Ghorbani, **Balal Khalilzadeh** and et al, [*Kinetic and thermodynamic study of c-Met interaction with single chain fragment variable \(scFv\) antibodies using phage based surface plasmon resonance*](#) European Journal of Pharmaceutical Sciences 150 (2020) 105362. **(Impact factor: 3.616)**
- 4) Bakhshali Massoumi, **Balal Khalilzadeh** and et al, [*Gelatin-based nanofibrous electrically conductive scaffolds for tissue engineering applications*](#) International Journal of Polymeric Materials and Polymeric Biomaterials (2020) 1-10. **(Impact factor: 1.982)**
- 5) Bakhshali Massoumi, **Balal Khalilzadeh** and et al, [*A novel bio-inspired conductive, biocompatible, and adhesive terpolymer based on polyaniline, polydopamine, and polylactide as scaffolding biomaterial for tissue engineering*](#) International journal of biological macromolecules 147 (2020) 1174-1184. **(Impact factor: 5.162)**
- 6) Maryam Mansouri, **Balal Khalilzadeh** and et al, [*Design a highly specific sequence for electrochemical evaluation of meat adulteration in cooked sausages.*](#) Biosensors and Bioelectronics, 150 (2020), 111916. **(Impact factor: 10.257)**
- 7) Ibrahim Isildak, **Balal Khalilzadeh** and et al, [*Electrochemiluminescence methods using CdS quantum dots in aptamer-based thrombin biosensors: a comparative study.*](#) Microchimica Acta 187 (1), (2020), 25-38. **(Impact factor: 6.232)**
- 8) Ramin Pourakbari, **Balal Khalilzadeh** and et al, [*Recent progress in nanomaterial-based electrochemical biosensors for pathogenic bacteria.*](#) Microchimica Acta 186 (12), (2019), 820-833. **(Impact factor: 6.232)**
- 9) Sattar Akbari Nakhjavani, **Balal Khalilzadeh** and et al, [*Gold and silver bio/nano-hybrids-based electrochemical immunosensor for ultrasensitive detection of carcinoembryonic antigen.*](#) Biosensors and Bioelectronics, 141 (2019), 111439. **(Impact factor: 10.257)**
- 10) **Balal Khalilzadeh** and et al, [*Development of a reliable microRNA based electrochemical genosensor for monitoring of miR-146a, as key regulatory of neurodegenerative disease.*](#) International Journal of Biological Macromolecules, 134, (2019), 695-703. **(Impact factor: 5.162)**
- 11) **Balal Khalilzadeh** and et al, [*Advances in nanomaterial based optical biosensing and bioimaging of apoptosis via caspase-3 activity: a review.*](#) Microchimica Acta 185 (9), (2018), 434-453. **(Impact factor: 6.232)**
- 12) Sattar Akbari Nakhjavani, **Balal Khalilzadeh** and et al, [*A highly sensitive and reliable detection of CA15-3 in patient plasma with electrochemical biosensor labeled with magnetic beads.*](#) Biosensors and Bioelectronics, 122 (2018), 8-15. **(Impact factor: 10.257)**
- 13) Nasrin Shadjou, **Balal Khalilzadeh** and et al, [*Graphene based scaffolds on bone tissue engineering.*](#) Bioengineered, 9(1), 2017, 38-47.
- 14) **Balal Khalilzadeh** and et al, [*Recent advances in electrochemical and electrochemiluminescence based determination of the activity of caspase-3.*](#) Microchimica Acta 184 (10), 2017, 3651-3662. **(Impact factor: 6.232)**
- 15) **Balal Khalilzadeh** and et al, [*Ultrasensitive caspase-3 activity detection using an electrochemical biosensor engineered by gold nanoparticle functionalized MCM-41: Its application during stem cell differentiation.*](#) Sensors and Actuators B: Chemical 231 (2016) 561-575. **(Impact factor: 7.1)**

- 16) Hadi Afsharan, **Balal Khalilzadeh** and et al, [Highly sensitive electrochemiluminescence detection of p53 protein using functionalized Ru-silica nanoporous@ gold nanocomposite](#). *Biosensors and Bioelectronics* 80 (2016) 146–153. **(Impact factor: 10.257)**
- 17) Mohammad Hasanzadeh, **Balal Khalilzadeh** and et al, [Nanosilica grafted by sulfonic acid: a novel nanocomposite towards amplification of mitoxantrone electrooxidation signals](#). *Nanocomposites* 2 (2016) 76-83.
- 18) Hadi Afsharan, **Balal Khalilzadeh** and et al, [A sandwich type immunosensor for ultrasensitive electrochemical quantification of p53 protein based on gold nanoparticles/graphene oxide](#). *Electrochimica Acta* 188 (2016) 153-164. **(Impact factor: 6.215)**
- 19) **Balal Khalilzadeh** and et al, [Reduced graphene oxide decorated with gold nanoparticle as signal amplification element on ultra-sensitive electrochemiluminescence determination of caspase-3 activity and apoptosis using peptide based biosensor](#). *BioImpacts*, 2016, 6(3), 135-147. **(Impact factor: 3.475)**
- 20) **Balal Khalilzadeh** and et al, [A reliable self-assembled peptide based electrochemical biosensor for detection of caspase 3 activity and apoptosis](#). *RSC Advances* 5 (2015) 58316-58326. **(Impact factor: 3.119)**
- 21) **Balal Khalilzadeh** and et al, [Preparation of a New Electrochemical Sensor Based on Cadmium Oxide Nanoparticles and Application for Determination of Penicillamine](#). *International Journal of Electrochemical Science* 6 (2011) 4164-4175.
- 22) Lotfali Saghatforoush, **Balal Khalilzadeh** and et al, [Deposition of new thia-containing Schiff-base iron \(III\) complexes onto carbon nanotube-modified glassy carbon electrodes as a biosensor for electrooxidation and determination of amino acids](#). *Electrochimica Acta* 56 (2011) 1051-1061.
- 23) Ali Babaie, **Balal Khalilzadeh** and et al, [A New Sensor for Simultaneous Determination of Tyrosine and Dopamine using iron \(III\) doped zeolite modified carbon paste electrode](#). *Chinese Journal of Chemistry* 28 (2010) 1967-1972.
- 24) Ali Babaie, **Balal Khalilzadeh** and et al, [A new sensor for the simultaneous determination of paracetamol and mefenamic acid in a pharmaceutical preparation and biological samples using cooper \(II\) doped zeolite modified carbon paste electrode](#). *Journal of Applied Electrochemistry* 40 (2010) 1537-1543.
- 25) Isa Kazeman, **Balal Khalilzadeh** and et al, [Oxygen Reduction Reaction on a Rotating Ag/GC Disk Electrode in Acidic Solution](#). *Electroanalysis* 28 (2010) 504-508.
- 26) Mohammad Hasanzadeh, **Balal Khalilzadeh** and et al, [Determination of Adrenaline by new pharmacokinetic method](#). *Analytical & Bioanalytical Electrochemistry* 2 (2010) 98-111.
- 27) Mohammad Hasanzadeh, **Balal Khalilzadeh** and et al, [A new Kinetic-mechanism Approach to Elucidate formaldehyde Electrooxidation on Copper electrode](#). *Electroanalysis* 22 (2010) 168-176.
- 28) **Balal Khalilzadeh** and et al, [Zeolite nanoparticle modified carbon paste electrode as a biosensor for simultaneous determination of Dopamine and Tryptophan](#). *Journal of Chinese chemical society* 56 (2009) 789–796.
- 29) Mohammad Hasanzadeh, **B. Khalilzadeh** and et al, [Cobalt hydroxide nanoparticles modified glassy carbon electrode as a biosensor for Electrooxidation and determination of some amino acids](#). *Analytical Biochemistry* 389 (2009) 130-137.
- 30) Mohammad Hasanzadeh, **Balal Khalilzadeh** and et al, [Kinetic study of the electro-catalytic oxidation of hydrazine on a cobalt hydroxide modified glassy carbon electrode](#). *Chinese Journal of Chemistry* 27 (2009) 638-644.
- 31) Mohammad Hasanzadeh, **Balal Khalilzadeh** and et al, [Electrocatalytic oxidation of cyclohexanol on a copper electrode modified by copper–dimethylglyoxime complex formed by electrochemical synthesis](#). *Bulletin of Korean chemical society* 30 (2009) 2943-2948.
- 32) Ghasem karimnezhad, **Balal Khalilzadeh** and et al, [Electro-oxidation of ascorbic acid catalyzed on cobalt hydroxide-modified glassy carbon electrode](#). *Journal of the Serbian chemical society* 74 (2009) 581-593.
- 33) Lotfali Saghatforoush, **Balal Khalilzadeh** and et al, [Kinetic study of the Electrooxidation of mefenamic acid and indomethacin catalysed on cobalt hydroxide modified glassy carbon electrode](#). *Bulletin of Korean chemical society* 30 (2009) 1341-1348.

- 34) Ali Babaie, **Balal Khalilzadeh** and et al, *A sensitive simultaneous determination of Epinephrine and tyrosine using an iron (III) Doped zeolite modified carbon paste electrode.* Journal of the Brazilian chemical society 20 (2009) 1862-1869.
- 35) Ghasem karimnezhad, **Balal Khalilzadeh** and et al, *Kinetic Study of Electrocatalytic Oxidation of Carbohydrates on Cobalt Hydroxide Modified Glassy Carbon Electrode.* Journal of the Brazilian Chemical Society 20 (2009) 141-151.
- 36) Mohammad Hasanzadeh, **Balal Khalilzadeh** and et al, *A study of the electrocatalytic oxidation of cyclohexanol on copper electrode.* Catalysis Communication 10 (2008) 295-299.
- 37) Ali Babaie, **Balal Khalilzadeh** and et al, *Simultaneous Determination of Tryptophan, Uric acid and Ascorbic acid at Iron (III) Doped Zeolite Modified Carbon Paste Electrode.* Colloids and Surfaces B: Biointerfaces 66 (2008) 226-232.

International Seminars and Conferences:

- 1) Ali Babaie, **Balal Khalilzadeh** and et al, *Application of a Sensor Based on Iron (III) Doped Zeolite Modified Carbon Paste Electrode for a sensitive simultaneous determination of Tyrosine and Dopamine.* 1st Iran International Zeolite Conference (IIZC'08) held on April 29-May 1, 2008. **(Lecture)**

Publications (local)

- 1) **Balal Khalilzadeh** and et al, *One Step to Detect the Acute Myeloid Leukemia (AML) by Ultrasensitive Detection of Single Cancer Stem Cell.* The 3rd National Festival and International Congress on Stem Cell and Regenerative Medicine 28 Nov – 1 Dec 2018 Tehran, Iran. **(Lecture)**.
- 2) **Balal Khalilzadeh** and et al, *Development of nano-scale electrochemical biosensors and its application in the stem cell studies.* 11th Iranian Biennial Electrochemistry Seminar Sep.9-11, 2014.
- 3) **Balal Khalilzadeh** and et al, *Cyclohexanol Oxidation by Using Copper–Dimethylglyoxime Electrode.* 8th Biennial Electrochemistry Seminar of Iran (8BESI) July.14-16, 2009.
- 4) Ali Babaie, **Balal Khalilzadeh** and et al, *Simultaneous Determination of Acetaminophen and Indomethacin at Copper (II) Doped Zeolite Modified Carbon Paste Electrode.* 8th Biennial Electrochemistry Seminar of Iran (8BESI) July.14-16. 2009.
- 5) Ali Babaie, **Balal Khalilzadeh** and et al, *A sensitive simultaneous determination of adrenaline and tyrosine using zeolite modified carbon paste electrode doped with iron (III).* The First Symposium on Bioelectrochemistry, Institute of Biochemistry and Biophysics, University of Tehran, Tehran, Iran, Oct 13-15, 2008.
- 6) Ali Babaie, **Balal Khalilzadeh**, *A sensitive simultaneous determination of paracetamol and mefenamic acid using copper (II) doped zeolite modified carbon paste electrode.* The First Symposium on Bioelectrochemistry, Institute of Biochemistry and Biophysics, University of Tehran, Tehran, Iran, Oct 13-15, 2008.
- 7) Ali Babaie and **Balal Khalilzadeh** and et al, *Simultaneous Determination of Tryptophan, Uric acid and Ascorbic acid at Iron (III) Doped Zeolite Modified Carbon Paste Electrode.* 7th Biennial Electrochemistry Seminar of Iran (7BESI) Aug.28-30, 2007. **(Lecture)**

Reviewer of Scientific Journals:

- 1) Biosensors and Bioelectronics (Impact factor: 10.257)
- 2) Sensors and Actuators B: Chemical (Impact factor: 7.1)
- 3) Journal of Electroanalytical Chemistry (Impact factor: 3.807)
- 4) Journal of Molecular Liquids (Impact factor: 5.065)
- 5) Journal of Molecular Recognition (Impact factor: 2.214)
- 6) Future Medicinal Chemistry (Impact factor: 3.607)
- 7) Journal of Drug Delivery Science and Technology (Impact factor: 2.734)
- 8) Advanced Pharmaceutical Bulletin (Impact factor: 10.257)

Research interests:

Electrochemical and electrochemiluminescence based sensors and biosensors, nanomaterials synthesis and applications. Also, early detection of silent diseases like most types of cancers and neurodegenerative diseases by the developed biosensors.

References:

1. Prof. Mohammad-Reza Rashidi

Professor of medicinal chemistry, Department of Pharmacy, Tabriz University of medical sciences, Tabriz, Iran
rashidi@tbzmed.ac.ir

2. Dr. Hojjatollah Nozad Charoudeh

Associated Professor of Anatomical sciences, Department of Medicine, Tabriz University of medical sciences, Tabriz, Iran
nozadh@tbzmed.ac.ir

3. Prof. Yadollah Omdi

Professor of Pharmaceutical Nanotechnology, Department of Pharmacy, Tabriz University of medical sciences, Tabriz, Iran
yomidi@yahoo.com

4. Prof. Ali babaie

Professor of Analytical Chemistry, Department of Chemistry, University of Arak, Arak, Iran.
A-Babaei@araku.ac.ir