

IN THE NAME OF GOD

CURRICULUM VITAE

Personal information

Surname: Rafiee-Pour

First name: Hossain-Ali

Date of birth: 22 March 1974

Nationality: Persian

Marital status: Married



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Education

- **2011 up to now:** Assistant Professor in Biophysics.

Department of Biotechnology, Faculty of Chemistry, University of Kashan, I.R. Iran.

- **2004–2010:** PhD student in Biophysics.

Institute of Biochemistry and Biophysics, University of Tehran, Tehran, I.R. Iran.

Project title: *Improvement of electron transferring in Superoxide Dismutase (SOD) by nanoparticles.*

Supervisor: Prof. Hedayatollah Ghourchian, hadi@ibb.ut.ac.ir

- **1999–2003:** M. Sc. in Biophysics.

Institute of Biochemistry and Biophysics, University of Tehran, Tehran, I.R. Iran.

Project Title: *Monitoring of Lysozyme denaturation by urea via electrophoresis.*

Supervisor: Late Prof. Mohammad Nabi Sarbolouki, sarbol@ibb.ut.ac.ir

- 1994–1999: B. Sc. in Biology (Zoology).

Faculty of Science, Shahid Beheshti University, Tehran, I.R. Iran.

Personal skills and competence

Language(s): Persian, English

Professional experience:

1. Bio-electrochemistry (CV, DPV, Amperometry, Impedance)
2. Protein (Enzyme, Antibody) immobilization and stabilization
3. Nucleic acids immobilization
4. Protein characterization (UV-Vis, CD and Fluorescence spectroscopy, PAG electrophoresis)
5. Nanoparticles functionalization (CNTs or metal nanostructures)
6. Electrophoresis

Current interests

1. Study of nanoparticles surface properties with some electrochemical techniques, for example SPR , AFM etc.
2. Biosensor designing for cancer diagnosis.
3. Synthesis and application of biomaterials.

Training

Biophysics

Radiation Biology

Physical Biochemistry

Biological Statistics

Biology

Zoology (and its laboratory)

Publication

1. Determination of pore/protein Size via electrophoresis and slit sieve model. Mohammad N. Sarbolouki, Karim Mahnam, Hossain-Ali Rafiee-Pour. *Electrophoresis*, 2004, 25, 2907–2911.
2. Electrochemistry of oriented Cytochrome c monolayer on modified gold electrode and its in situ denaturation in organic/aqueous medium. Hossain-Ali Rafiee-Pour, Hassan Shafiey, Hedayatollah Ghourchian. *Analytical & Bioanalytical Electrochemistry*, 2009, Vol. 1, No. 3, 126–141.
3. Ionic-liquid/NH₂-MWCNTs as a highly sensitive nano-composite for catalase direct electrochemistry. Parvaneh Rahimi, Hossain-Ali Rafiee-pour, Hedayatollah Ghourchian, Parviz Norouzi, Mohammad Reza Ganjali. *Biosensors & Bioelectronics*, 2010, 25, 1301–1306.
4. Sensitive superoxide biosensor based on silicon carbide nanoparticles. Hossain-Ali Rafiee-Pour, Abdollah Noorbakhsh, Abdollah Salimi, Hedayatollah Ghourchian. *Electroanalysis*, 2010, Vol. 22, No. 14, 1599–1606.
5. Detection and dosimetry of gamma ray emitted from thallium-201 and technetium-99m based on chemiluminescence technique. Mostafa Shourian, Hassan Tavakoli, Hedayatollah Ghourchian, Hossain-Ali Rafiee-Pour. *Radiation Measurements*, 2010, 45, 906–910.
6. Alcohol dehydrogenase immobilization on functionalized carbon nano-tubes modified electrode. Seyed Ahmad Dehdast, Hedayatollah Ghourchian, Hossain-Ali Rafiee-pour. *Journal of Paramedical Sciences*, 2010, Vol.1, No.3, 22–26.
7. Dose rate determination of gamma rays emitted by thallium-201 and technetium-99m using a modified horseradish peroxidase based biosensor. Mostafa Shourian, Hedayatollah Ghourchian, Hossain-Ali Rafiee-Pour, Hassan Tavakoli. *Journal of the Iranian Chemical Society*, 2010, 7, 900–907.
8. Amine functionalized TiO₂ coated on carbon nanotube as a nano material for direct electrochemistry of glucose oxidase and glucose biosensing. Mahboubeh Tasviri, Hossain-Ali Rafiee-Pour, Hedayatollah Ghourchian, Mohammad R. Gholami. *Journal of Molecular Catalysis B: Enzymatic*, 2011, 68, 206–210.

9. Direct voltammetry of copper, zinc-superoxide dismutase immobilized onto electrodeposited nickel oxide nanoparticles: Fabrication of amperometric superoxide biosensor. Abdollah Salimi, Abdollah Noorbakhsh, Hossain-Ali Rafiee-Pour, Hedayatollah Ghourchian. *Electroanalysis*, 2011, Vol. 23, No. 3, 683–691.
10. A biocompatible nanocomposite for glucose sensing. Parvaneh Rahimi, Hedayatollah Ghourchian, Hossain-Ali Rafiee-pour, Parviz Norouzi, Mohammad Reza Ganjali. *International journal of electrochemistry*, 2011, 2011, 7 pages (DOI:10.4061/2011/470607).
11. Cysteine function in superoxide dismutase direct electrochemistry and superoxide anion detection. Hossain-Ali Rafiee-pour, Hedayatollah Ghourchian, Khadijeh Eskandari. *Analytical & Bioanalytical Electrochemistry*, 2011, Vol. 3, No. 3, 215–226.
12. Superoxide radical biosensor based on a nano-composite containing cytochrome c. Parvaneh Rahimi, Hedayatollah Ghourchian, Hossain-Ali Rafiee-Pour. *Analyst*, 2011, 136, 3803–3808.
13. Amine functionalized TiO₂-carbon nanotube composite: Synthesis, characterization and application to glucose biosensing. Mahboubeh Tasviri, Hossain-Ali Rafiee-Pour, Hedayatollah Ghourchian, Mohammad R. Gholami. *Applied Nanoscience*, 2011, 1, 189–195.
14. Accelerating the electron transfer of choline oxidase using ionic-liquid/NH₂-MWCNTs nano-composite. Sharareh Sajjadi, Hedayatollah Ghourchian, Hossain-Ali Rafiee-Pour, Parvaneh Rahimi. *Journal of the Iranian Chemical Society*, xxx, Vol. xx, No. xx, xxx–xxx, in press (DOI 10.1007/s13738-011-0044-5).
15. Horseradish peroxidase immobilization on amine functionalized carbon nanotube: direct electrochemistry and bioelectrocatalysis. Mahboubeh Tasviri, Hossain-Ali Rafiee-Pour, Hedayatollah Ghourchian, Mohammad R. Gholami. *Progress in Reaction Kinetics and Mechanism*, 2011, xxx, xxx–xxx, accepted.

Contributions to Workshops, Seminars and Conferences

1. Detection of superoxide anion by gold enzyme electrode. Fatemeh Amini Akbarabadi, Hossain-Ali Rafiee-Pour, Hedayatollah Ghourchian. The 7th Biennial Electrochemistry Seminar of Iran (7 BESI), August 28-30, 2007, Urmia University, Western Azerbaijan, Iran.
2. Application of functionalized-multiwall carbon nanotubes for detection of thiocholine. Bahareh Zahedi, Hossain-Ali Rafiee-Pour, Seyed Abbas Shojaosadati, Hedayatollah Ghourchian. The 8th Iran Biophysical Chemistry Conference, March 11-13, 2008, University of Sistan & Baluchestan, Sistan & Baluchestan, Iran.
3. Cyclic voltammetry of cytochrome c on gold nanoparticles modified Au electrode in presence of dimethyl sulphoxide. Sanaz Emami, Hossain-Ali Rafiee-Pour, Hedayatollah Ghourchian. The 8th Iran Biophysical Chemistry Conference, March 11-13, 2008, University of Sistan & Baluchestan, Sistan & Baluchestan, Iran.
4. MP-11/NH₂-FSM16 nanozyme as an artificial peroxidase; kinetic and voltammetric studies. Yahya Sefidbakht, Hossain-Ali Rafiee-Pour, Farzaneh Farivar, Khodadad Nazari, Hedayatollah Ghourchian, A. A. Moosavi- Movahedi. The First Regional Symposium on Bioelectrochemistry, October 13-15, 2008, Institute of Biochemistry and Biophysics, University of Tehran, Tehran, Iran.
5. Cysteine role on electron transferring in Cu, Zn-superoxide dismutase. Hossain-Ali Rafiee-Pour, Hasan Shafiey, Hedayatollah Ghourchian. The First Regional Symposium on Bioelectrochemistry, October 13-15, 2008, Institute of Biochemistry and Biophysics, University of Tehran, Tehran, Iran.
6. The direct electron transfer of Glucose Oxidase based on magnetic carbon nanotubes. Hossain-Ali Rafiee-Pour, Leila Meskoub Haghghi, Mahdi Riazati-Keshe, Hedayatollah Ghourchian. The First Regional Symposium on Bioelectrochemistry, October 13-15, 2008, Institute of Biochemistry and Biophysics, University of Tehran, Tehran, Iran.

7. Glucose biosensor based on DBD plasma functionalized multiwalled carbon nanotubes. F. Khodadadi, S.M. Hossainipour, M. Soltanieh, H. Ghourchian, H.A. Rafieepour. The 5th Analytical Electrochemistry Conference of Iran, May 7-8, 2009, Tarbiat Modares University, Tehran, Iran.
8. Direct electrochemistry of choline oxidase at carbon nanotube-ionic liquid modified electrode. S. Sajjadi, H.A. Rafiee-Pour, P. Rahimi, H. Ghourchian, A. Keyhan. The 8th Biennial Electrochemistry Seminar of Iran, July 14-16, 2009, University of Kurdistan, Sanandaj, Iran.
9. Dielectric barrier discharge plasma functionalized carbon nanotubes for glucose biosensing application. F. Khodadadi, S.M. Hossainipour, M. Soltanieh, H.A. Rafiee-Pour, H. Ghourchian. The 8th Biennial Electrochemistry Seminar of Iran, July 14-16, 2009, University of Kurdistan, Sanandaj, Iran.
10. Direct electrochemistry and electrocatalysis of catalase immobilized on RTIL/functionalized-MWCNTs film. P. Rahimi, H.A. Rafiee-Pour, H. Ghourchian, P. Norouzi, M.R. Ganjali. The 8th Biennial Electrochemistry Seminar of Iran, July 14-16, 2009, University of Kurdistan, Sanandaj, Iran.
11. A bioelectrochemical method for detection of ionizing ray sources. M. Shourian, H. A. Rafiee-Pour, H. Ghourchian, H. Tavakoli. The 8th Biennial Electrochemistry Seminar of Iran, July 14-16, 2009, University of Kurdistan, Sanandaj, Iran.
12. A novel disposable functionalized-carbon nanotube/ionic liquid modified screen-printed biosensor for glucose detection. P. Rahimi, H.A. Rafiee-pour, H. Ghourchian, P. Norouzi, M.R. Ganjali. The 9th Iran Biophysical Chemistry Conference, February 24-25, 2010, Tarbiat Modares University, Tehran, Iran. (Published in: Journal of the Iranian Chemical Society, Vol. 7, Suppl. 1, S 17, February 2010).
13. Direct electrochemistry of chemically modified Laccase immobilized on carbon nanotube-ionic liquid composite. H. Faridnouri, H.A. Rafiee-pour, H. Ghourchian. The 9th Iran Biophysical

Chemistry Conference, February 24-25, 2010, Tarbiat Modares University, Tehran, Iran. (Published in: Journal of the Iranian Chemical Society, Vol. 7, Suppl. 1, S 17, February 2010).

14. Detection and dosimetry of gamma ray through reduction of cytochrome C based on superoxide radical anion production. H. Tavakoli, M. Shourian, H. Ghourchian, H.A Rafiee-Pour, M.M. Modarres Mosalla. The 9th Iran Biophysical Chemistry Conference, February 24-25, 2010, Tarbiat Modares University, Tehran, Iran. (Published in: Journal of the Iranian Chemical Society, Vol. 7, Suppl. 1, S 17, February 2010).

15. Ethanol biosensor based on the alcohol dehydrogenase immobilized on carbon nanotubes adsorbed on methylene green nano-layer. Seyed Ahmad Dehdast, Hossain-Ali rafiee-pour, Mohammad Shabani, Hedayatollah Ghourchian. The 9th Iran Biophysical Chemistry Conference, February 24-25, 2010, Tarbiat Modares University, Tehran, Iran. (Published in: Journal of the Iranian Chemical Society, Vol. 7, Suppl. 1, S 17, February 2010).

16. Carbon nanotube-ionic liquid composite for choline biosensing. S. Sajjadi, H.A. rafiee-pour, H. Ghourchian, A.H. Keyhan. Proceedings of 3rd IUMS conference on application of nanotechnology in medicine and biomedical sciences, Razi Center, Iran University of Medical Science, Tehran, Iran. P. 9, February 2010.

17. Fabrication a nanobiosensor based on alcohol dehydrogenase and carbon nanotubes for alcohol detection. Seyed Ahmad Dehdast, Hossain-Ali rafiee-pour, Shabnam Vojudi Nobakht, Mohammad Shabani, Hedayatollah Ghourchian. Proceedings of 3rd IUMS conference on application of nanotechnology in medicine and biomedical sciences, Razi Center, Iran University of Medical Science, Tehran, Iran. P. 114, February 2010.

18. Sensitivity improvement for glucose biosensing based on the nano-composite of ionic liquid-amine functionalized-carbon nanotubes. Hossain Ali Rafiee-pour, Parvaneh Rahimi, Hedayatollah Ghourchian. Proceedings of 3rd IUMS conference on application of nanotechnology in medicine and biomedical sciences, Razi Center, Iran University of Medical Science, Tehran, Iran. P. 119, February 2010.

- 19.** Electrochemistry and electrocatalysis of choline oxidase based on Ionic-liquid/NH₂-MWCNTs nano-composite. Sharareh Sajjadi, Hedayatollah Ghourchian, Amir-Homayoon Keyhan, Hossain-Ali Rafiee-Pour, Parvaneh Rahimi. The 61th Annual Meeting of the International Society of Electrochemistry. September 26th-October 1st, 2010, Nice, France.
- 20.** Direct electrochemistry of cytochrome c immobilized in ionic liquid/hooc-MECNTs and its application for superoxide sensing. P. Rahimi, H.A. Rafieepour, H. Ghourchian, P. Norouzi, M.R. Ganjali. The 3rd International Congress on Nanoscience and Nanotechnology. November 9-11, 2010, Shiraz University, Shiraz, Iran.
- 21.** An electrochemical biosensing system for direct electrochemistry of cytochrome c and quantification of superoxide radical. H. Ghourchian, P. Rahimi, H.A. Rafiee-Pour. The 9th Biennial Electrochemistry Seminar of Iran, July 14-16, 2010, University of Yazd, Yazd, Iran.
- 22.** Effect of different RTIL-CNT nano-composites on the electrochemistry and electrocatalysis of choline oxidase. P. Rahimi, H. Ghourchian, S. Sajjadi, H.A. Rafiee-Pour. XXI International Symposium on Bioelectrochemistry and Bioenergetics. 8-10 May 2011, Cracow, Poland.
- 23.** Direct electrochemistry of chemically modified tyrosinase immobilized on carbon nanotube-ionic liquid composite. H. Faridnouri, H. Ghourchian, H.A. Rafiee-Pour. 2nd International Conference on Bio-sensing Technology. International Symposium on Bioelectrochemistry and Bioenergetics. 10-12 October 2011, Amsterdam, Netherlands.