

CURRICULUM VITAE

PERSONAL DATA

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| 1) First name: | Ali |
| 2) Surname: | Baradar Khoshfetrat |
| 3) Sex: | Male |
| 4) Marital status: | Married- three children |
| 5) Birth date & place: | 9/23/1972, Urmia, Iran |
| 6) Nationality: | Iranian |
| 7) Languages: | Turkish (Mother tongue)
Persian (Native)
English (Good)
Japanese (Intermediate) |



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EDUCATION

- 1) **B.Sc**, Chemical Engineering, Shiraz University, Shiraz, Iran (1991-1995)
- 2) **M.Sc**, Chemical Engineering (Biotechnology field), Sharif University of Technology, Tehran, Iran (1995-1997)
- 3) **Ph.D**, Chemical Engineering (Tissue Engineering field), Osaka University, Osaka, Japan (2005-2009)
Thesis title: Characterization of Chondrocyte Behaviors Affecting Quality of Cultured Cartilage

SCHOLARSHIPS AND AWARDS

- 1) 2005-2009 Japanese government (Monbukagakushu) scholarship for Ph.D study.

- 2) 2007 Young Investigator Award, TERMIS-AP, Tokyo, Japan.
 - 3) 2013/6-2013/9 JASSO Fellow-up Research Fellowship, Osaka University, Japan.
 - 4) 2019/6-2019/12 Visiting prof., Polymer Chemistry Group- Angstrom Lab, Uppsala University, Sweden.
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EXPERIENCE

- 1) 1999-2005 Lecturer in Chemical Engineering Faculty, Sahand University of Technology, Tabriz, Iran.
 - 2) 2000-... Researcher in Environmental Engineering Research Center (EERC), Sahand University of Technology, Tabriz, Iran.
 - 3) 2009-... Assistant prof., Sahand University of Technology, Tabriz, Iran.
 - 4) 2010-... Founding director, Stem Cells and Tissue Engineering Research Lab, Sahand University of Tech., Tabriz, Iran,
 - 5) 2014-2022 Associate prof., Sahand University of Technology, Tabriz, Iran.
 - 6) 2022-... Prof., Sahand University of Technology, Tabriz, Iran
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TOUGHT COURSES

Graduate:

- 1) Biomaterials in tissue engineering
- 2) Enzyme technology
- 3) Experimental design and statistics for engineering
- 4) Chemical processing of Drugs and Active Pharmaceutical Ingredients

Undergraduate:

- 1) Thermodynamics II
 - 2) Process control
 - 3) Plant design and economics for chemical engineering
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COMPLETED GRADUATE THESES

Master degree (M.Sc.): 32

Doctoral degree (Ph.D): 6

RESEARCH INTEREST PRIORITIES

- 1) Natural biomaterials improvement and characterization for tissue engineering applications (Targets: Bone, cartilage, skin, liver) and drug delivery systems
 - 2) Bioreactor and culture system design and operation
 - 3) Advanced oxidation processes and biological wastewater treatment
 - 4) Active Pharmaceutical Ingredients isolation and purification
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RESEARCH PROJECTS

- 1) A. B. Khoshfetrat, "Important factors and their importance in plants preliminary design", 1999
- 2) A. B. Khoshfetrat, J. S. Soltanmohammadzadeh, "Phenolic wastewater treatment by using ozone", 2000-2002
- 3) A. B. Khoshfetrat, J. S. Soltanmohammadzadeh, "Pilot scale removal of both color and COD from petrochemical complex biological wastewater plant by using ozone", 2002-2003
- 4) A. Abbaspour, J. S. Soltanmohammadzadeh and A. B. Khoshfetrat, "Measurement of volumetric mass transfer coefficients in Dissolved Air Flotation (DAF) process, 2003-2004
- 5) A. B. Khoshfetrat, Animal cell culture in collagen gel (3D) and on collagen surface (2D), COE program, Osaka University, 2006-2009
- 6) A. B. Khoshfetrat, Examination of possibility of local Penicillium.Chrysogenum strain improvement for penicillin G production by random screening procedure, Sahand University of Technology, 2009-2010
- 7) A. B. Khoshfetrat, F. Abbasi and R. Yegani, "Collagen gel production from calf skin to construct engineered cartilage (2009-2013)
- 8) A. B. Khoshfetrat and A. A. Babalou, "Hyaluronic acid production from economical sources for industrial and medical uses and generating engineered tissues (2010-2013)
- 9) A. B. Khoshfetrat, S. Ebrahimi, A. A. Movassaghpour, K. Shams, Design and manufacturing of a bench-scale controlled stirred bioreactor for controlled-expansion of hematopoietic stem cells to use in bone marrow transplantation (2011-2014)
- 10) A. B. Khoshfetrat, Improvement of natural biomaterials as a 3D platform for mass production of stem cells and production of modular tissues (2014-2018).
- 11) A. B. Khoshfetrat, Design and performance evaluation of a novel and economical cell culture strategy based on stirred bioreactor with improved aeration system for mass production of stem cells (Case study: hematopoietic stem cell) (2017-2021)
- 12) A. B. Khoshfetrat, Commercialization of collagen production for cosmetic and pharmaceutical uses (2019-2021).

- 13) A. B. Khoshfetrat, R. Rahbarghazi, Application of microneedle patch arrays for the induction of angiogenesis in a rabbit model of hind limb ischemia (2022-2024)
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INDUSTRY RELATIONS ACTIVITIES

- 1) Bench-scale ultra-low temperature freeze dryer (6 L, -90°C) design, manufacturing and start-up (IR patent No 91646-2017/03/14).
 - 2) Obtaining native collagen approval from IR FDA for food and cosmetic uses (2022).
 - 3) Scientific and technological advisor for product quality improvement of collagen peptide plant (2023).
 - 4) Scientific and technological consultant for construction of the following plants:
 - Biodiesel and glycerin production (2022- ...).
 - Gelatin and collagen peptide production (2022-...)
 - Cocoa butter substitute (CBS) production (2023-...)
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PUBLICATIONS

- 1) Zeynalzadeh, S., Deghani, E., Hassani, A., Khoshfetrat, A.B.*, Salami-Kalajahi, M.: Effect of curcumin-loaded poly (amidoamine) dendrimer on cancer cell lines: a comparison between physical loading and chemical conjugation of drug, *Polym. Bull.*, **81**, 1439-1452 (2024).
- 2) Saghati, S., Avci, C.B., Hassani, A., Nazifkerdar, S., Amini, H., Saghebasl, S., Mahdipour, M., Banimohamad-Shotorbani, B., Rezaei Namjoo, A., Nazary Abrbekoh, F., Rahbarghazi, R., Tayefi Nasrabadi, H., Khoshfetrat, A.B.*: Phenolated alginate hydrogel induced osteogenic properties of mesenchymal stem cells via Wnt signaling pathway, *Int. J. Biol. Macromol.*, **253**, 127209 (2023).
- 3) Derakhty Gonbad , A.H., Khoshfetrat, A.B., Movassaghpour, A.A., Sanaat, Z., Nozad Charoudeh, H.: Developing a Multichannel Bioreactor with a Collagen Scaffold, ECM, and Cryoprecipitate to Significantly Produce Platelets from Umbilical Cord Blood Stem Cells, *Int. J. Hematol. Oncol. Stem Cell Res.*, **17**, 245–256 (2023).
- 4) Derakhty Gonbad , A.H., Khoshfetrat, A.B., Movassaghpour, A.A., Sanaat, Z., Nozad Charoudeh, H.: Efficient Production of Platelets from Umbilical Cord Blood Stem Cells Using A Collagen-Tragacanth Scaffold in A Multi-Chamber Bioreactor, *Iran J. Ped. Hematol. Oncol.*, **13**, 192-205 (2023).

- 5) Ghanbari, E., Mehdipour, A., Khazaei, M., Khoshfeterat, A.B., Niknafs, B.: Green Synthesized Magnesium Oxide Nanoparticles Reinforce Osteogenesis Properties of Bacterial Cellulose Scaffolds for Bone Tissue Engineering Applications: An In Vitro Assessment, *Cell J.*, **25**, 483–495 (2023).
- 6) Ghanbari, E., Mehdipour, A., Khazaei, M., Khoshfeterat, A.B., Niknafs, B.: A review of recent advances on osteogenic applications of Silk fibroin as a potential bio-scaffold in bone tissue engineering, *Int. J. Polym. Mater.*, **72**, 665-680 (2023).
- 7) Fathi-Karkan, S., Heidarzadeh, M., Taghavi Narmi, M., Mardi, N., Amini, H., Saghati, S., Nazary Ahrbekoh, F., Saghebasl, S., Rahbarghazi, R., Khoshfetrat, A.B.*: Exosome-loaded microneedle patches: promising factor delivery route, *Int. J. Biol. Macromol.*, **243**, 125232 (2023).
- 8) Mohseni, S., Khoshfetrat, A.B.*, Rahbarghazi, R., Khodabakhshaghdam, S., Shafiei Kaleybar, L.: Influence of shear force on ex vivo expansion of hematopoietic model cells in a stirred tank bioreactor, *J. Biol. Eng.*, **17**, 38 (2023).
- 9) Amirzad, H., Khoshfetrat, A.B., Zarghami, N.: A dual synergistic effect of titanium and curcumin co-embedded on extracellular matrix hydrogels of decellularized bone: Potential application in osteoblastic differentiation of adipose-derived mesenchymal stem cells, *J. Biomater. Sci. Polym. Ed.*, **34**, 372-397 (2023).
- 10) Sharifi, E., Rahbar Shahrouzi, J., Jafarizadeh-Malmiri, H., Ghaffari, S., Khoshfetrat, A.B.: Optimization of microencapsulation of metronidazole in alginate microbeads for purpose of controlled release, *Polym. Bull.*, **79**, 8883–8903 (2022).
- 11) Ebrahimzadeh, A., Khanalizadeh, E., Khodabakhshaghdam, S., Kazemi, D., Khoshfetrat, A.B.*: Influence of gelatin modification on enzymatically-gellable pectin-gelatin hydrogel properties for soft tissue engineering applications, *J. Bioact. Compat. Pol.*, **37**, 381-391 (2022).
- 12) Nazary Ahrbekoh, F., Valizadeh, N., Hassani, A., Ghale, H. Mahboob, S.A., Rahbarghazi, R., Khoshfetrat, A.B., Madipour M.: Combination of polyglycerol sebacate coated with collagen for vascular engineering, *J Cardiovasc Thorac Res.*, **14**, 172–179 (2022).
- 13) Hassani A., Avci Ç.B., Kerdar S.N., Amini H., Amini M., Ahmadi M., Sakai S., Goker Bagca B., Pınar Ozates N., Rahbarghazi R., Khoshfetrat A.B.*: Interaction of alginate with nano-hydroxyapatite-collagen using strontium provides suitable osteogenic platform, *J. Nanobiotechnology*, **20**, 1-22 (2022).
- 14) Sadeghzadeh H., Mehdipour A., Dianat-Moghadam H., Salehi R., Khoshfetrat A.B., Hassani A., Mohammadnejad D.: PCL/Col I-based magnetic nanocomposite scaffold provides an osteoinductive environment for ADSCs in osteogenic cues-free media conditions, *Stem Cell Res. Ther.*, **13**, 1-18 (2022).
- 15) Mohammadlou T., Babaluo A.A., Khoshfetrat A.B.: Preparation of high flux mesoporous γ -alumina membranes for whey proteins isolation: Peptizing agent (acetic acid) and binder (PEG) effects, *Ceram. Int.*, **48**, 21235-21244 (2022).

- 16) Maghsoodi M., Astemal S.M., Nokhodchi A., Kiaie H., Khoshfetrat A.B., Talebi F.: An Insight into Eudragit S100 Preserving Mechanism of Cinnarizine Supersaturation, *AAPS Pharm. Sci. Tech.*, **23**, 1-16 (2022).
- 17) Hassani A., Khoshfetrat A.B.*, Rahbarghazi R., Sakai S.: Collagen and nano-hydroxyapatite interactions in alginate-based microcapsule provide an appropriate osteogenic microenvironment for modular bone tissue formation, *Carbohydr. Polym.*, **277**, 118807 (2022).
- 18) Saghati S., Khoshfetrat A.B., Tayefi Nasrabadi H., Roshangar L., Rabarghazi R.: Fabrication of alginate-based hydrogel cross-linked via horseradish peroxidase for articular cartilage engineering, *BMC Res. Notes*, **14**, 384 (2021) doi: 10.1186/s13104-021-05795-2.
- 19) Bakhtiary Z., Shahrooz R., Hobbenaghi R., Azizi S., Soltanlinejad F., Khoshfetrat A.B.: Histomorphometrical evaluation of extensor digitorum longus muscle in sciatic nerve regeneration using tissue engineering in rats, *Vet. Res. Forum*, **12**, 451-457 (2021).
- 20) Amani A., Shahrooz R., Hobbenaghi R., Mohammadi R., Khoshfetrat A.B., Karimi A., Bakhtiari Z., Adcock I.M., Mortaz E.: Angiogenic effects of cell therapy within a biomaterial scaffold in a rat hind limb ischemia model, *Sci. Rep.*, **11**, 20545 (2021). <https://doi.org/10.1038/s41598-021-99579-0>.
- 21) Sharifi E., Rahbar Shahrouzi J., Jafarizadeh-Malmiri J., Ghaffari S., Khoshfetrat A.B.: Optimization of microencapsulation of metronidazole in alginate microbeads for purpose of controlled release, *Polym. Bull.* (2021) <https://doi.org/10.1007/s00289-021-03933-1>.
- 22) Shirzaei Sani I., Rezaei M., Khoshfetrat A.B., Razzaghi D.: Preparation and characterization of polycaprolactone/chitosan-g-polycaprolactone/hydroxyapatite electrospun nanocomposite scaffolds for bone tissue engineering, *Int. J. Biol. Macromol.*, **182**, 1638-1649 (2021).
- 23) Khodabakhshaghdam S., Khoshfetrat A.B.*, Rahbarghazi R.: Alginate-chitosan core-shell microcapsule cultures of hepatic cells in a small scale stirred bioreactor: impact of shear forces and microcapsule core composition, *J. Biol. Eng.*, **15**, 14 (2021) doi: 10.1186/s13036-021-00265-6.
- 24) Kahaei Khosrowshahi A., Khoshfetrat A. B.*, Beygi Khosrowshahi Y., Maleki-Ghaleh H.: Cobalt content modulates characteristics and osteogenic properties of cobalt-containing hydroxyapatite in in-vitro milieu. *Mater. Today Commun.*, **25**, 102392 (2021).
- 25) Hassanpour M., Fathi Karkan S., Rahbarghazi, R., Nouri, M., Amini H., Saghati, S., Khoshfetrat A.B.: Culture of rabbit bone marrow mesenchymal stem cells on polyurethane/pyrrole surface promoted differentiation into endothelial lineage, *Artif. Organs*, **45**, E324-E334 (2021) doi: 10.1111/aor.13971.
- 26) Saghati S., , Rahbarghazi R. , Khoshfetrat A.B., Moharamzadeh K., Tayefi Nasrabadi H., Roshangar L.: Phenolated alginate-collagen hydrogel induced chondrogenic capacity of human amniotic mesenchymal stem cells, *J. Biomater. Appl.* (2021) doi: 10.1177/08853282211021692.

- 27) Kaleybar L.S., Khoshfetrat A.B.*, Rahbarghazi R., Charoudeh H.N.: Performance evaluation of a novel conceptual bioprocess for clinically-required mass production of hematopoietic cells, *Biotechnol. Lett.* **43**, 959-966 (2021).
- 28) Alipour M. , Firouzi N. , Aghazadeh Z. , Samiei M. , Montazersaheb S. , Khoshfetrat A.B.*, Aghazadeh M.: The osteogenic differentiation of human dental pulp stem cells in alginate-gelatin/ Nano-hydroxyapatite microcapsules, *BMC Biotechnol.*, **21**, 6 (2021).
- 29) Ahmadian M., Khoshfetrat A.B.*, Khatami N., Morshedloo F., Rahbarghazi R., Hassani A., Kiani S.: Influence of gelatin and collagen incorporation on peroxidase-mediated injectable pectin-based hydrogel and bioactivity of fibroblasts. *J. Biomater. Appl.* (2021) doi: 10.1177/0885328220977601.
- 30) Fathi Karkan, S., Rahbarghazi, R., Davaran, S., Shafiei Kaleybar, L., Khoshfetrat, A.B., Heidarzadeh, M., Elmira, Z., Akbarzadeh, A.: Electrospun polyurethane/poly (ϵ -caprolactone) nanofibers promoted the attachment and growth of human endothelial cells in static and dynamic culture conditions. *Microvasc. Res*, **113**, 104073 (2021).
- 31) Irani, R., Khoshfetrat, A.B.*, Forouzesh, M.: Real municipal wastewater treatment using simultaneous pre and post-ozonation combined biological attached growth reactor: Energy consumption assessment. *J. Environ.Chem. Eng.*, **9**, 104595 (2021).
- 32) Morshedloo F., Khoshfetrat A.B.*, Kazemi D., Ahmadian M.: Gelatin improves peroxidase-mediated alginate hydrogel characteristics as a potential injectable hydrogel for soft tissue engineering applications. *J. Biomed. Mater. Res. B Appl.Biomater.* **108**, 2950-2960 (2020).
- 33) Kaleybar L.S., Khoshfetrat A.B.*, Charoudeh H.N.: Modeling and performance prediction of a conceptual bioprocess for mass production of suspended stem cells. *Food Bioprod. Process.*, **122**, 254-268 (2020).
- 34) Aghdam S.K., Khoshfetrat A.B.*, Rahbarghazi R., Jafarizadeh-Malmiri H., Khaksar, M.: Collagen modulates functional activity of hepatic cells inside alginate-galactosylated chitosan hydrogel microcapsules. *Int. J. Biol. Macromol.* **156**, 1270-1278 (2020).
- 35) Firouzi N., Khoshfetrat A.B.*, Kazemi D.: Enzymatically-gellable gelatin improves nano-hydroxyapatite-alginate microcapsule characteristics for modular bone tissue formation. *J. Biomed. Mater. Res. A*, **108**, 340-350 (2020).
- 36) Amani S., Shahrooz R., Mortaz E., Hobbenaghi R., Mohammadi R., Khoshfetrat A.B.: Histomorphometric and immunohistochemical evaluation of angiogenesis in ischemia by tissue engineering in rats: Role of mast cells. *Vet. Res. Forum.* **10**, 23 (2019).

- 37) Mousavi S., Khoshfetrat A.B.*, Khatami N., Ahmadian M., Rahbarghazi R.: Comparative study of collagen and gelatin in chitosan-based hydrogels for effective wound dressing: Physical properties and fibroblastic cell behavior. *Biochem. Biophys. Res. Commun.* **518**, 625-631(2019).
- 38) Khatami N., Khoshfetrat A.B.*, Khaksar M., Rezaie Nezhad Zamani A., Rahbarghazi R.: Collagen-alginate-nano silica microspheres improved the osteogenic potential of human osteoblast-like MG-63 cells. *J. Cell. Biochem.* **120**, 15069-15082 (2019).
- 39) Ghaffari S., Shahrouzi J.R., Towfighi F., Khoshfetrat A.B. Partitioning of cefazolin in aqueous two-phase systems containing poly (ethylene glycol) and sodium salts (citrate, tartrate, and sulphate). *Fluid Phase Equilibr.*, **488**, 54-61 (2019).
- 40) Nabavinia M., Khoshfetrat A.B.*, Naderi-Meshkin H.: Nano-hydroxyapatite-alginate-gelatin microcapsule as a potential osteogenic building block for modular bone tissue engineering. *Mater. Sci. Eng. C.* **97**, 66-77 (2019).
- 41) Nemati S., Alizadeh Sardroud H., Khoshfetrat A.B.*, Khaksar M., Ahmadi M., Amini H., Saberianpour S., Delkhosh, A., Movassaghpour A.A., Rahbarghazi R.: The effect of alginate-gelatin encapsulation on the maturation of human myelomonocytic cell line U937. *J. Tissue Eng. Regen. Med.* **13**, 25-35 (2019).
- 42) Tarantash M, Nosrati H, Kheiri Manjili H, Khoshfetrat A.B.*: Preparation, characterization and in vitro anticancer activity of paclitaxel conjugated magnetic nanoparticles. *Drug dev. Ind. Pharm.* **44**, 1895-1903 (2018).
- 43) Ghaz-Jahanian M.A., Khoshfetrat A.B.*, Rostami M.H., Parapari M.H.: An innovative bioprocess for methane conversion to methanol using an efficient methane transfer chamber coupled with an airlift bioreactor. *Chem. Eng. Res. Des.*, **134**, 80-89 (2018).
- 44) Kordkandi S.A., Khoshfetrat A.B.*, Faramarzi A: Performance modelling of a partially-aerated submerged fixed-film bioreactor: Mechanistic analysis versus semi data-driven method. *J. Ind. Eng. Chem.*, **61**, 398-406 (2018).
- 45) Forouzesh M, Khoshfetrat A.B.*, Kordkandi S.A.: Partially aerated submerged fixed-film bioreactor for simultaneous removal of carbon and nutrients from high-strength nitrogen wastewaters: effect of aeration rate and C:N:P ratio. *Water Sci Technol.* **76**, 877-884 (2017).
- 46) Nemati S, Rezabakhsh A, Khoshfetrat A.B.*, Nourazarian A, Biray Avci Ç, Goker Bagca B, Alizadeh Sardroud H, Khaksar M, Ahmadi M, Delkhosh A, Sokullu E, Rahbarghazi R: Alginate-gelatin encapsulation of human endothelial cells promoted angiogenesis in in vivo and in vitro milieu. *Biotechnol Bioeng.* **114**, 2920-2930 (2017).
- 47) Alizadeh Sardroud H, Nemati S, Khoshfetrat A. B.*, Nabavinia M, Beygi Khosrowshahi Y: Barium-cross-linked alginate-gelatine microcapsule as a potential platform for stem cell production and modular tissue formation. *J Microencapsul.* **34**, 488-497 (2017).

- 48) Hatamzadeh, M., Najafi-Moghadam, P., Khoshfetrat A. B., Jaymand, M., Massoumi, B.: Novel nanofibrous electrically conductive scaffolds based on poly(ethylene glycol)s-modified polythiophene and poly(ϵ -caprolactone) for tissue engineering applications, *Polymer*, **107**, 177-190 (2016).
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- 50) Beygi Khosrowshahi, Y., Khoshfetrat, A. B.*, Shams Asenjan, K.: Ex vivo expansion of hematopoietic stem cells in a proliferation chamber with external stirred conditioning tank: Sequential optimization of growth factors. *Eng. Life Sci.*, **16**, 254-262 (2016).
- 51) Alizadeh Kordkani, S., Khoshfetrat, A. B.*: Influence of carbon/nitrogen ratio and non-aerated zone size on performance and energy efficiency of a partially-aerated submerged fixed-film bioreactor. *J. Ind. Eng. Chem.*, **31**, 257-262 (2015).
- 52) Beygi Khosrowshahi, Y., Khoshfetrat, A. B.*, Abolghasemi, Z., Shams Asenjan, K.: Performance evaluation of a proliferation chamber with external stirred conditioning tank for expansion of a suspendable stem cell model. *Process Biochem.*, **50**, 1110-1118 (2015).
- 53) Ghaleh, H., Abbasi, F., Alizadeh, M., Khoshfetrat, A. B.: Mimicking the quasi-random assembly of protein fibers in the dermis by freeze-drying method. *Mater. Sci. Eng. C*, **49**, 806-815 (2015).
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- 55) Khanmohammadi, M., Khoshfetrat, A. B.*, Eskandarnezhad, S., Sani N. F., Ebrahimi, S.: Sequential optimization strategy for hyaluronic acid extraction from eggshell and its partial characterization. *J. Ind. Eng. Chem.*, **20**, 4371-4376 (2014).
- 56) Hosseini, M., Khoshfetrat, A. B.*, Sahraei, E., Ebrahimi, S.: Continuous nitrifying granular sludge bioreactor: Influence of aeration and ammonium loading rate, *Process Saf. Environ. Protect.*, **92**, 869-878 (2014).
- 57) Gholbandi, R., Abdi, M. A., Babalou, A. A., Khoshfetrat, A. B., Mohammadlou, T.: Fouling study of TiO₂-boehmite MF membrane in defatting of whey solution: Feed concentration and pH effects, *J. Memb. Sci.*, **448**, 132-148 (2013).
- 58) Hosseini, M., Sahraei, E., Khoshfetrat, A. B., Ebrahimi, S.: Nitrate and nitrite removal using a continuous heterotrophic denitrifying granular sludge bioreactor, *Chem. Eng. Technol.*, **36**, 2101-2107 (2013).
- 59) Alizadeh, M., Abbasi, F., Khoshfetrat, A. B., Ghaleh, H.: Microstructure and characteristic properties of gelatin/chitosan scaffold prepared by a combined freeze-drying/leaching method, *Mater. Sci. Eng. C*, **33**, 3958-3967 (2013).

- 60) Houshyar, Z., Khoshfetrat, A. B*, Fatehifar, E.: Influence of ozonation process on characteristics of pre-alkalized tannery effluents, *Chem. Eng. J.*, **191**, 59-65 (2012).
- 61) Khoshfetrat, A. B*, Nikakhtari, H., Sadeghifar, M. and Khatibi, M. S.: Influence of organic loading and aeration rates on performance of a lab-scale upflow aerated submerged fixed-film bioreactor, *Process Saf. Environ. Protect.*, **89**, 193-197 (2011).
- 62) Yazdanshenas, M., Tabatabaee-Nezhad, S. A. R., Soltanieh, M., Roostaazad, R. and Khoshfetrat, A. B.: Contribution of fouling and gel polarization during ultrafiltration of raw apple juice at industrial scale, *Desalination*, 258, 194-200 (2010)
- 63) Khoshfetrat, A. B., Kino-oka, M., Takezawa, Y., Yamamoto, T., Sugawara, K., and Taya, M.: Seeding density modulates migration and morphology of rabbit chondrocytes cultured in collagen gels, *Biotechnol. Bioeng.*, **102**, 294-302 (2009).
- 64) Khoshfetrat, A. B., Kino-oka, M., Sugawara, K., and Taya, M.: A collagen-coated surface enables quantitative evaluation of morphological behaviors of rabbit chondrocytes relating to cell differentiation in an early culture phase. *Biochem. Eng. J.*, **45**, 60-68 (2009).
- 65) Kino-oka, M., Maeda, Y., Sato, Y., Maruyama, N., Takezawa, Y. Khoshfetrat, A. B., Sugawara, K. and Taya, M.: Morphological evaluation of chondrogenic potency in passaged cell populations. *J. Biosec. Bioeng.*, 107, 544-551 (2009).
- 66) Khoshfetrat, A. B., Kino-oka, M., Takezawa, Y., Sato, Y., Yamamoto, T., Sugawara, K., and Taya, M.: Effect of transforming growth factor- β 1 on morphological characteristics relating to migration and differentiation of rabbit chondrocytes cultured in collagen gels. *J. Biosec. Bioeng.*, **106**, 547-553 (2008).
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- 68) Yazdanshenas, M., Tabatabaee-Nezhad, A. R., Roostaazad, R., and Khoshfetrat, A. B.: Full scale analysis of apple juice ultrafiltration and optimization of diafiltration. *Sep. Pur. Technol.*, **47**, 52-57 (2005).
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- 70) Soltan Mohammadzadeh, J. S., Khoshfetrat, A. B., and Kaynejad, M. A.: Pilot scale system for removal of phenol in phenolic wastewater of olefin plant. *Process Saf. Environ. Protect.*, **82**, 365-370 (2004).
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* Acting as corresponding author

CONFERENCES & SEMINARS

- 1) L. Shafiei Kaleybar, A. B. Khoshfetrat, “A Novel Stirred Tank Bioreactor with Sequencing Batch Aeration System for Mass Production of Stem Cells: Conceptual Design, Modeling and Performance Analysis”, The 3rd National Festival and International Congress on Stem Cell and Regenerative Medicine, Tehran, Iran, 2018, (28 Nov-1 Dec).
- 2) S. Kiani Golshouri, A. B. Khoshfetrat, “Effect of Gelatin on Characteristics of an Enzymatically- Gellable Alginate Hydrogel Scaffold for Cartilage Tissue Engineering”, The 3rd National Festival and International Congress on Stem Cell and Regenerative Medicine, Tehran, Iran, 2018, (28 Nov-1 Dec).
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