



PROFILE

Date of Birth: February 24, 1966

Place of Birth: Tabriz -Iran

Nationality: Iranian

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SOODABEH DAVARAN

EDUCATION

University of Tabriz, Iran

1991 - 1996

PhD in Polymer Chemistry

University of Tabriz, Iran

1989 - 1991

BSc in Organic Chemistry

WORK EXPERIENCE

Tabriz University of Medical Sciences (Professor of Pharmaceutical Biomaterial)

Tabriz University of Medical Sciences (Director of Health Innovation and Acceleration Center)

Experienced Instructor of Organic Chemistry, Polymer Sciences, Biomaterials, Synthesis Of Organic Compounds, Nanomaterial, Nanomedicine

Director of East Azerbaijan branch of Iranian Society of Nanomedicine

PROMINENT AWARDS AND HONORS

UNESCO Medal and Award for "Development of Nanosciences and Nanotechnologies" (2015)

RESEARCH INTERESTS

Drug Delivery and Nanomedicine, including Smart Polymers; Biodegradable polymeric nanoparticles; Novel nanobiomaterial; Natural hydrogels

AWARDS AND HONORS

2015 UNESCO Medal and Award for “Development of Nanosciences and Nanotechnologies”

2016 Research Chair award - Iran National Science Foundation

2012 Selected as one of the "TOP 100 Scientists" (International Biographical Centre, Cambridge, England, UK).

2008 Selected as "2000 Outstanding Intellectuals of the 21th Century", (International Biographical Centre, Cambridge, England, UK).

2007 Awarded as "Women Elites of Iran and All Elites around the Islamic World".

2007 Awarded as "Distinguished Researchers of the East Azerbaijan Province".

2003 First Rank of "9th Razi Festival" in Basic Sciences.

2003 Awarded as the "Top researcher of Research Centers of Tabriz University of Medical Sciences".

2000 "Who's Who in Plastics and Polymers", First Edition, Society of Plastic Engineers, Technomic Publishing Company Inc., Lancaster, Pennsylvania, USA.

RESEARCH INTERESTS

The principal research focus is Drug Delivery and Nanomedicine including:

- Smart polymers: Synthesis and application in drug delivery systems.
- Biodegradable polymeric nanoparticles: Synthesis and uses in diseases targeted drug delivery systems focus on cancer therapy and diagnosis.
- Novel nanobiomaterials: synthesis and use in tissue engineering and regenerative medicine.
- Natural hydrogels: fabrication for wound-healing applications

TEACHING EXPERIENCE

Organic chemistry, polymer sciences, biomaterials, synthesis of organic compounds, nanomaterial, nanomedicine.

EDITORIAL DUTIES

- Associate editor of Chemical Review & Letters
- Editorial board of BioImpacts, Tabriz University of Medical Sciences
- Editorial board of Pharmaceutical Sciences, Journal of Faculty of Pharmacy, Tabriz University of Medical Sciences
- Editorial board of Controlled Release Journal, The official journal of Controlled Release Society of Iran

MEMBERSHIP IN COUNCILS

- Council of the Club of the Laureates of UNESCO medal “Contribution to development of nanoscience and nanotechnologies
- Joint Ukraine-Azerbaijan International Research and Education Center of Nanobiotechnology and Functional Nanosystems
- Technology Council of Tabriz University of Medical Sciences
- Policy Council of Health Innovation & Acceleration center, Tabriz University of Medical Sciences
- Tabriz City Council Advisors, East Azerbaijan province, Iran
- Nanomedicine Examination Board, Iran Ministry of Health and Medical Education

SELECTED PUBLICATIONS

BOOKS AND BOOK CHAPTERS:

1. Target Delivery of Iron Oxide Magnetic Nanoparticles for Imaging and Treatment, Magnetic Nanoheterostructures, Diagnostic, Imaging and Treatment, chapter 8, Surender Kumar Sharma Yasir Javed Editors, Springer Publications
2. Impact of Nanotechnology on Medical Sciences, Tehran Royan Pajouh, 2019
3. A Handbook of Applied Biopolymer Technology: Synthesis, Degradation and Applications (RSC Green Chemistry), Chapter 13; Impacts of Biodegradable Polymers towards Biomedical Applications, Royal Society of Chemistry; 1 edition (June 23, 2011).
4. Advanced Nanoparticles and their Applications in Biomedical Sciences, Publications of Tabriz University of Medical Sciences.

SELECTED NATIONAL PRESENTATIONS

- ✓ Synthesis, *in-vitro* and *in-vivo* evaluations of functionalized magnetic iron oxide nanoparticles for cancer therapy and diagnosis, 2019, First Eurasian Conference on Nanotechnology, Baku, Azerbaijan
- ✓ Synthesis and biomedical application of magnetic mesoporous silicananoparticles in drug delivery and tissue engineering, The 5th Iran International Zeolit Conference, August 2018
- ✓ Davaran S., Rashidi M.R., Shayanfar A., Anzabi M., Preparation and *in-vitro* evaluation of star-branched PLGA nanoparticles for insulin delivery, First International Congress On Nanoscience and Nanotechnology, 2006: December Tehran, Iran
- ✓ Davaran S., Hanaee J., Valiollahi F., Influence of poly (ethylene glycol) - cyclodextrin complexes on stabilization and transdermal permeation of ascorbic acid, 10th Iranian Pharmaceutical Science Conference, 2006: August Tehran Iran
- ✓ Davaran S., Hamidi A.A., Rashi M.R., Synthesis of amphiphilic polymers containing 5- amino salicylic acid designed for colon-specific drug delivery systems, 10th Iranian Pharmaceutical Science Conference, 2006: August Tehran Iran.

- ✓ Davaran S., Hanaee J., Ordukhanian J., Synthesis and hydrolytic behavior of ibuprofen prodrugs, First Seminar of Medicinal & Natural Products Chemistry, 2005, May, Shiraz, Iran.
- ✓ Davaran S, Rashidi MR, Khani A. Synthesis of Novel Acrylic Type Hydrogels for Colon-Specific Drug Delivery Systems. 9th Seminar of Pharmaceutical Sciences. 2004; August. Tabriz- Iran.
- ✓ Mahkam M, Davaran S, Ramesh M. Synthesis of Novel Polyurethane Conjugates of 5-amino Salicylic Acid Designed for Colon-Specific Drug Delivery Systems. 9th Seminar of Pharmaceutical Sciences. 2004; Aug 23-26. Tabriz-Iran.
- ✓ Davaran S, Rashidi MR, Hamishehkar H. Novel Prolonged Activity Nicotine Patch Cross-Linked Poly Vinyl Alcohol Rate-Controlling Membrane. 8th Iranian Seminar of Pharmaceutical Sciences. 2002; Aug 27-29, Shiraz-Iran.
- ✓ Hemati S, Davaran S, Sari R, Rashidi MR. Optimized Preparation of Gancyclovir in Bench Scale. 8th Iranian Seminar of Pharmaceutical Sciences. 2002; Aug 27-29, Shiraz-Iran.
- ✓ Davaran S, Hemati S, Rashidi MR. Modification of 6-Mercaptopurine and Azathioprine Synthesis in Bench Scale. 8th Iranian Seminar of Pharmaceutical Sciences. 2002; Aug 27-29, Shiraz-Iran.
- ✓ Davaran S, Rashidi MR, Shahsafi M. Application of Hydrolyzate Collagenin Detergent Formulations. 6th international seminar on Hygienic and cosmetics industries. 2000; Sep 25-27, Tehran-Iran.
- ✓ Davaran S, Rashidi MR, Hanaee J. Synthesis of New Polymeric Pro-drugs of 5-Amino Salicylic Acid and the Assay of Non-enzymatic Release of Drug. 7th seminar of Iranian Pharmaceutical Society (ISPS). 2000; Aug 27-30, Mashhad-Iran.

- ✓ Davaran S, Hanaee J, Khosravi A. Preparation and Release of 5-Amino Salicylic Acid from Acrylic Type Polymeric Pro-drugs Designed for Colon- Specific Drug Delivery Systems. 6th Seminar of Pharmaceutical Sciences.1998; Aug 27-29, Isfahan-Iran.
- ✓ Davaran S, Entezami AA, Karimi L. Synthesis and Hydrolysis of Modified Poly Vinyl Alcohol Pro-drugs of Non-Steroidal Anti-Inflammatory Drugs. 5th Iranian seminar of orgaic chemistry, Isfahan university of Technology, 1996;August 17-19, Isfahan-Iran.
- ✓ Davaran S. Synthesis and Hydrolysis of Polyurethanes Containing Ibuprofen Monoglycerides. 5th Iranian seminar of orgaic chemistry,Isfahan university of Technology, 1996; August 17-19, Isfahan-Iran.
- ✓ Davaran S, Entezami AA. Synthesis, Polymerization, and Hydrolysis of Methacrylic Derivatives of Ibuprofen. 4th Iranian seminar of organic chemistry, Ferdowsi University, 1995; October 17-19. Mashhad-Iran.
- ✓ Davaran S, Bagheri M, Fakhri S, Entezami AA. A Convenient Method for Studying Hydrolysis Progress of Poly Acryloyloxy Acetanilide. International seminar of polymer science and technology, 1994; May 2-4. Shiraz-Iran

PATENTS

- ✓ Preparation of smart nanoparticles for drug delivery
- ✓ Preparation of nanoparticles for oral delivery of insulin
- ✓ Preparation of transdermal patches with novel permeationenhancers
- ✓ Preparation of nicotine transdermal patches
- ✓ Preparation of aryl bis oxazoline catalysts for synthesis of chiralcompounds
- ✓ Production of Erlotenib (a potent anti-cancer drug)

- ✓ Prolonged action drug delivery systems for narcotic addiction treatment
- ✓ Preparation of sustained release naltrexone delivery systems for use in narcotic addiction
- ✓ Preparation of modified magnetic nanoparticles containing doxorubicin used for treatment of lung cancer

PUBLISHED PAPERS

(1-220)

1. Zivari-Ghader T, Dolati S, Mehdizadeh A, Davaran S, Rashidi MR, Yousefi M. Recent scaffold-based tissue engineering approaches in premature ovarian failure treatment. *Journal of Tissue Engineering and Regenerative Medicine*. 2022.
2. Shakoori Z, Pashaei-Asl R, Pashaiasl M, Davaran S, Ghanbari H, Ebrahimie E, et al. Biocompatibility study of P (N-isopropylacrylamide)-based nanocomposite and its cytotoxic effect on HeLa cells as a drug delivery system for Cisplatin. *Journal of Drug Delivery Science and Technology*. 2022;71.
3. Safari B, Aghazadeh M, Roshangar L, Aghanejad A, Davaran S. A bioactive porous scaffold containing collagen/ phosphorous-modified polycaprolactone for osteogenesis of adipose-derived mesenchymal stem cells. *European Polymer Journal*. 2022;171.
4. Safari B, Aghazadeh M, Davaran S, Roshangar L. Exosome-loaded hydrogels: A new cell-free therapeutic approach for skin regeneration. *European Journal of Pharmaceutics and Biopharmaceutics*. 2022;171:50-9.
5. Safari B, Aghanejad A, Kadkhoda J, Aghazade M, Roshangar L, Davaran S. Biofunctional phosphorylated magnetic scaffold for bone tissue engineering. *Colloids and Surfaces B: Biointerfaces*. 2022;211.
6. Porrang S, Davaran S, Rahemi N, Allahyari S, Mostafavi E. How Advancing are Mesoporous Silica Nanoparticles? A Comprehensive Review of the Literature. *International Journal of Nanomedicine*. 2022;17:1803-27.
7. Nasserri B, Alizadeh E, Bani F, Davaran S, Akbarzadeh A, Rabiee N, et al. Nanomaterials for photothermal and photodynamic cancer therapy. *Applied Physics Reviews*. 2022;9(1).

8. Kheirjou R, Rad JS, Khosroshahi AF, Davaran S, Roshangar L. Evaluation the ability of acellular ovine small intestine submucosa to load and release of mineral pitch and its anti-inflammatory effects. *Cell and Tissue Banking*. 2022.
9. Kadkhoda J, Tarighatnia A, Barar J, Aghanejad A, Davaran S. Recent advances and trends in nanoparticles based photothermal and photodynamic therapy. *Photodiagnosis and Photodynamic Therapy*. 2022;37.
10. Kadkhoda J, Aghanejad A, Safari B, Barar J, Rasta SH, Davaran S. Aptamer-conjugated gold nanoparticles for targeted paclitaxel delivery and photothermal therapy in breast cancer. *Journal of Drug Delivery Science and Technology*. 2022;67.
11. Jahanbani Y, Shafiee S, Davaran S, Roshangar L, Ahmadian E, Eftekhari A, et al. Stem cells technology as a platform for generating reproductive system organoids and treatment of infertility-related diseases. *Cell Biology International*. 2022;46(4):512-22.
12. Hazrati R, Davaran S, Omid Y. Bioactive functional scaffolds for stem cells delivery in wound healing and skin regeneration. *Reactive and Functional Polymers*. 2022;174.
13. Ghandforoushan P, Hanaee J, Aghazadeh Z, Samiei M, Navali AM, Khatibi A, et al. Novel nanocomposite scaffold based on gelatin/PLGA-PEG-PLGA hydrogels embedded with TGF- β 1 for chondrogenic differentiation of human dental pulp stem cells in vitro. *International Journal of Biological Macromolecules*. 2022;201:270-87.
14. Foroughi-Nia B, Aghanejad A, Kadkhoda J, Barar J, Nosrati H, Davaran S. AS1411 conjugated magnetic-based poly N-isopropyl acrylamide nanoparticles for delivery of erlotinib to prostate cancer cells. *Applied Organometallic Chemistry*. 2022.
15. Fathi-Karkan S, Banimohamad-Shotorbani B, Saghati S, Rahbarghazi R, Davaran S. A critical review of fibrous polyurethane-based vascular tissue engineering scaffolds. *Journal of Biological Engineering*. 2022;16(1).
16. Adeli F, Abbasi F, Babazadeh M, Davaran S. Thermo/pH dual-responsive micelles based on the host-guest interaction between benzimidazole-terminated graft copolymer and β -cyclodextrin-functionalized star block copolymer for smart drug delivery. *Journal of Nanobiotechnology*. 2022;20(1).
17. Valipour F, Valipour F, Rahbarghazi R, Navali AM, Rashidi MR, Davaran S. Novel hybrid polyester-polyacrylate hydrogels enriched with platelet-derived growth factor for chondrogenic

differentiation of adipose-derived mesenchymal stem cells in vitro. *Journal of Biological Engineering*. 2021;15(1).

18. Safari B, Davaran S, Aghanejad A. Osteogenic potential of the growth factors and bioactive molecules in bone regeneration. *International Journal of Biological Macromolecules*. 2021;175:544-57.

19. Safari B, Aghanejad A, Roshangar L, Davaran S. Osteogenic effects of the bioactive small molecules and minerals in the scaffold-based bone tissue engineering. *Colloids and Surfaces B: Biointerfaces*. 2021;198.

20. Rashidzadeh H, Danafar H, Rahimi H, Mozafari F, Salehiabar M, Rahmati MA, et al. Nanotechnology against the novel coronavirus (severe acute respiratory syndrome coronavirus 2): Diagnosis, treatment, therapy and future perspectives. *Nanomedicine*. 2021;16(6):497-516.

21. Ranjbar-Navazi Z, Fathi M, Abdolahinia ED, Omidi Y, Davaran S. MUC-1 aptamer conjugated InP/ZnS quantum dots/nanohydrogel fluorescent composite for mitochondria-mediated apoptosis in MCF-7 cells. *Materials Science and Engineering C*. 2021;118.

22. Rahimi H, Salehiabar M, Barsbay M, Ghaffarlou M, Kavetsky T, Sharafi A, et al. CRISPR Systems for COVID-19 Diagnosis. *ACS Sensors*. 2021;6(4):1430-45.

23. Rahimi H, Davaran S, Nosrati H, Danafar H. Targeted Drug Delivery: Advancements, Applications, and Challenges. *Modeling and Control of Drug Delivery Systems* 2021. p. 195-212.

24. Porrhng S, Rahemi N, Davaran S, Mahdavi M, Hassanzadeh B, Gholipour AM. Direct surface modification of mesoporous silica nanoparticles by DBD plasma as a green approach to prepare dual-responsive drug delivery system. *Journal of the Taiwan Institute of Chemical Engineers*. 2021;123:47-58.

25. Porrhng S, Rahemi N, Davaran S, Mahdavi M, Hassanzadeh B. Preparation and in-vitro evaluation of mesoporous biogenic silica nanoparticles obtained from rice and wheat husk as a biocompatible carrier for anti-cancer drug delivery. *European Journal of Pharmaceutical Sciences*. 2021;163.

26. Porrhng S, Rahemi N, Davaran S, Mahdavi M, Hassanzadeh B. Synthesis of temperature/pH dual-responsive mesoporous silica nanoparticles by surface modification and radical polymerization for anti-cancer drug delivery. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*. 2021;623.

27. Nosrati H, Baghdadchi Y, Abbasi R, Barsbay M, Ghaffarlou M, Abhari F, et al. Iron oxide and gold bimetallic radiosensitizers for synchronous tumor chemoradiation therapy in 4T1 breast cancer murine model. *Journal of Materials Chemistry B*. 2021;9(22):4510-22.
28. Navidi G, Allahvirdinesbat M, Al-Molki SMM, Davaran S, Panahi PN, Aghazadeh M, et al. Design and fabrication of M-SAPO-34/chitosan scaffolds and evaluation of their effects on dental tissue engineering. *International Journal of Biological Macromolecules*. 2021;187:281-95.
29. Mehraliyeva S, Valiyeva M, Abbasli N, Suleymanova T, Musayeva S, Davaran S, et al. Development of novel antibacterial gel using clove and calendula extracts with colloidal silver nanoparticles. *Eurasian Chemical Communications*. 2021;3(3):170-9.
30. Khiabani SS, Aghazadeh M, Rakhtshah J, Davaran S. A review of hydrogel systems based on poly(N-isopropyl acrylamide) for use in the engineering of bone tissues. *Colloids and Surfaces B: Biointerfaces*. 2021;208.
31. Karkan SF, Rahbarghazi R, Davaran S, Kaleybar LS, Khoshfetrat AB, Heidarzadeh M, et al. Electrospun polyurethane/poly (ϵ -caprolactone) nanofibers promoted the attachment and growth of human endothelial cells in static and dynamic culture conditions. *Microvascular Research*. 2021;133.
32. Kadkhoda J, Akrami-Hasan-Kohal M, Tohidkia MR, Khaledi S, Davaran S, Aghanejad A. Advances in antibody nanoconjugates for diagnosis and therapy: A review of recent studies and trends. *International Journal of Biological Macromolecules*. 2021;185:664-78.
33. Ghotbi G, Hamzeh-Mivehroud M, Taghvimi A, Davaran S, Dastmalchi S. Investigation of Experimental and in Silico Physicochemical Properties of Thiazole-Pyridinium Anti-Acetylcholinesterase Derivatives with Potential Anti-Alzheimer's Activity. *Pharmaceutical Sciences*. 2021;27(3):366-77.
34. Foroughi-Nia B, Barar J, Memar MY, Aghanejad A, Davaran S. Progresses in polymeric nanoparticles for delivery of tyrosine kinase inhibitors. *Life Sciences*. 2021;278.
35. Dizaj SM, Eftekhari A, Mammadova S, Ahmadian E, Ardalan M, Davaran S, et al. Nanomaterials for chronic kidney disease detection. *Applied Sciences (Switzerland)*. 2021;11(20).
36. Divband B, Samiei M, Davaran S, Roshangar L, Shahi S, Aghazadeh M. Synthesis and in vitro evaluation of thermosensitive pla-g-p(Hem-co-nipaam) hydrogel used for delivery of vegf. *Biointerface Research in Applied Chemistry*. 2021;11(1):8043-51.

37. Asadi N, Pazoki-Toroudi H, Del Bakhshayesh AR, Akbarzadeh A, Davaran S, Annabi N. Multifunctional hydrogels for wound healing: Special focus on biomacromolecular based hydrogels. *International Journal of Biological Macromolecules*. 2021;170:728-50.
38. Asadi N, Mehdipour A, Ghorbani M, Mesgari-Abbasi M, Akbarzadeh A, Davaran S. A novel multifunctional bilayer scaffold based on chitosan nanofiber/alginate-gelatin methacrylate hydrogel for full-thickness wound healing. *International Journal of Biological Macromolecules*. 2021;193:734-47.
39. Abedi F, Davaran S, Hekmati M, Akbarzadeh A, Baradaran B, Moghaddam SV. An improved method in fabrication of smart dual-responsive nanogels for controlled release of doxorubicin and curcumin in HT-29 colon cancer cells. *Journal of Nanobiotechnology*. 2021;19(1).
40. Sadeghinia A, Soltani S, Aghazadeh M, Khalilifard J, Davaran S. Design and fabrication of clinoptilolite–nanohydroxyapatite/chitosan–gelatin composite scaffold and evaluation of its effects on bone tissue engineering. *Journal of Biomedical Materials Research - Part A*. 2020;108(2):221-33.
41. Rahmani Del Bakhshayesh A, Akbarzadeh A, Alihemmati A, Tayefi Nasrabadi H, Montaseri A, Davaran S, et al. Preparation and characterization of novel anti-inflammatory biological agents based on piroxicam-loaded poly- ϵ -caprolactone nano-particles for sustained NSAID delivery. *Drug Delivery*. 2020;27(1):269-82.
42. Rahimi H, Salehiabar M, Charmi J, Barsbay M, Ghaffarlou M, Roohi Razlighi M, et al. Harnessing nanoparticles for the efficient delivery of the CRISPR/Cas9 system. *Nano Today*. 2020;34.
43. Nosrati H, Rakhshbahar A, Salehiabar M, Afroogh S, Manjili HK, Danafar H, et al. Corrigendum to “Bovine serum albumin: An efficient biomacromolecule nanocarrier for improving the therapeutic efficacy of chrysin”(Journal of Molecular Liquids (2018) 271 (639–646), (S0167732218308456), (10.1016/j.molliq.2018.06.066)). *Journal of Molecular Liquids*. 2020;303.
44. Nosrati H, Charmi J, Abhari F, Attari E, Bochani S, Johari B, et al. Improved synergic therapeutic effects of chemoradiation therapy with the aid of a co-drug-loaded nano-radiosensitizer under conventional-dose X-ray irradiation. *Biomaterials Science*. 2020;8(15):4275-86.
45. Mohandesnezhad S, Pilehvar-Soltanahmadi Y, Alizadeh E, Goodarzi A, Davaran S, Khatamian M, et al. In vitro evaluation of Zeolite-nHA blended PCL/PLA nanofibers for dental

tissue engineering. *Materials Chemistry and Physics*. 2020;252.

46. Moghaddam SV, Abedi F, Alizadeh E, Baradaran B, Annabi N, Akbarzadeh A, et al. Lysine-embedded cellulose-based nanosystem for efficient dual-delivery of chemotherapeutics in combination cancer therapy. *Carbohydrate Polymers*. 2020;250.

47. Madhi M, Hasani A, Mojarrad JS, Rezaee MA, Zarrini G, Davaran S, et al. Impact of chitosan and silver nanoparticles laden with antibiotics on multidrug-resistant *Pseudomonas aeruginosa* and *Acinetobacter Baumannii*. *Archives of Clinical Infectious Diseases*. 2020;15(4):1-10.

48. Madhi M, Hasani A, Mojarrad JS, Rezaee MA, Zarrini G, Davaran S. Nano-strategies in pursuit of efflux pump activeness in *Acinetobacter baumannii* and *Pseudomonas aeruginosa*. *Gene Reports*. 2020;21.

49. Khaledi S, Jafari S, Hamidi S, Molavi O, Davaran S. Preparation and characterization of PLGA-PEG-PLGA polymeric nanoparticles for co-delivery of 5-Fluorouracil and Chrysin. *Journal of Biomaterials Science, Polymer Edition*. 2020;31(9):1107-26.

50. Jahanbani Y, Davaran S, Ghahremani-Nasab M, Aghebati-Maleki L, Yousefi M. Scaffold-based tissue engineering approaches in treating infertility. *Life Sciences*. 2020;240.

51. Ghotbi G, Mahdavi M, Najafi Z, Moghadam FH, Hamzeh-Mivehroud M, Davaran S, et al. Design, synthesis, biological evaluation, and docking study of novel dual-acting thiazole-pyridiniums inhibiting acetylcholinesterase and β -amyloid aggregation for Alzheimer's disease. *Bioorganic Chemistry*. 2020;103.

52. Farboudi A, Nouri A, Shirinzad S, Sojoudi P, Davaran S, Akrami M, et al. Synthesis of magnetic gold coated poly (ϵ -caprolactonediol) based polyurethane/poly(N-isopropylacrylamide)-grafted-chitosan core-shell nanofibers for controlled release of paclitaxel and 5-FU. *International Journal of Biological Macromolecules*. 2020;150:1130-40.

53. Farboudi A, Mahboobnia K, Chogan F, Karimi M, Askari A, Banihashem S, et al. UiO-66 metal organic framework nanoparticles loaded carboxymethyl chitosan/poly ethylene oxide/polyurethane core-shell nanofibers for controlled release of doxorubicin and folic acid. *International Journal of Biological Macromolecules*. 2020;150:178-88.

54. Davaran S, Sadeghinia M, Jamalpoor Z, Raeisdasteh Hokmabad V, Doosti-Telgerd M, Karimian A, et al. Multiple functions of microfluidic platforms: Characterization and applications in tissue engineering and diagnosis of cancer. *Electrophoresis*. 2020;41(12):1081-94.

55. Asadi N, Del Bakhshayesh AR, Davaran S, Akbarzadeh A. Common biocompatible polymeric materials for tissue engineering and regenerative medicine. *Materials Chemistry and Physics*. 2020;242.
56. Arteshi Y, Aghanejad A, Davaran S, Omidi Y. Semi self-doped electroconductive and biocompatible polyaniline/sulfonated β -cyclodextrin (PANI/SCD) inclusion complex with potential use in regenerative medicine. *International Journal of Polymeric Materials and Polymeric Biomaterials*. 2020;69(7):437-48.
57. Akbarzadeh A, Mikaeili H, Zarghami N, Mohammad R, Barkhordari A, Davaran S. Retraction: Preparation and in vitro evaluation of doxorubicin-loaded Fe₃O₄ magnetic nanoparticles modified with biocompatible copolymers [Int J Nanomedicine. 2012;7:511—526]. *International Journal of Nanomedicine*. 2020;15:5573-4.
58. Sadeghinia A, Davaran S, Salehi R, Jamalpoor Z. Nano-hydroxy apatite/chitosan/gelatin scaffolds enriched by a combination of platelet-rich plasma and fibrin glue enhance proliferation and differentiation of seeded human dental pulp stem cells. *Biomedicine and Pharmacotherapy*. 2019;109:1924-31.
59. Ranjbar-Navazi Z, Omidi Y, Eskandani M, Davaran S. Cadmium-free quantum dot-based theranostics. *TrAC - Trends in Analytical Chemistry*. 2019;118:386-400.
60. Nosrati H, Tarantash M, Bochani S, Charmi J, Bagheri Z, Fridoni M, et al. Glutathione (GSH) Peptide Conjugated Magnetic Nanoparticles As Blood-Brain Barrier Shuttle for MRI-Monitored Brain Delivery of Paclitaxel. *ACS Biomaterials Science and Engineering*. 2019;5(4):1677-85.
61. Nosrati H, Salehiabar M, Fridoni M, Abdollahifar MA, Kheiri Manjili H, Davaran S, et al. New Insight about Biocompatibility and Biodegradability of Iron Oxide Magnetic Nanoparticles: Stereological and In Vivo MRI Monitor. *Scientific Reports*. 2019;9(1).
62. Nosrati H, Javani E, Salehiabar M, Manjili HK, Davaran S, Danafar H, et al. Corrigendum: Biocompatibility and anticancer activity of L-phenyl alanine-coated iron oxide magnetic nanoparticles as potential chrysin delivery system (*Journal of Materials Research* (2018) 33 (1602) DOI: 10.1557/jmr.2018.148). *Journal of Materials Research*. 2019;34(23):3976.
63. Nosrati H, Davaran S, Kheiri Manjili H, Rezaeejam H, Danafar H. Bovine serum albumin stabilized iron oxide and gold bimetallic heterodimers: Synthesis, characterization and Stereological study. *Applied Organometallic Chemistry*. 2019;33(10).

64. Nosrati H, Abhari F, Charmi J, Davaran S, Danafar H. Multifunctional nanoparticles from albumin for stimuli-responsive efficient dual drug delivery. *Bioorganic Chemistry*. 2019;88.
65. Kazempour M, Edjlali L, Akbarzadeh A, Davaran S, Farid SS. Synthesis and characterization of dual pH-and thermo-responsive graphene-based nanocarrier for effective anticancer drug delivery. *Journal of Drug Delivery Science and Technology*. 2019;54.
66. Karkan SF, Davaran S, Rahbarghazi R, Salehi R, Akbarzadeh A. Electrospun nanofibers for the fabrication of engineered vascular grafts. *Journal of Biological Engineering*. 2019;13(1).
67. Karkan SF, Davaran S, Akbarzadeh A. Cisplatin-loaded superparamagnetic nanoparticles modified with PCL-PEG copolymers as a treatment of A549 lung cancer cells. *Nanomedicine Research Journal*. 2019;4(4):209-19.
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69. Hokmabad VR, Davaran S, Aghazadeh M, Rahbarghazi R, Salehi R, Ramazani A. Fabrication and characterization of novel ethyl cellulose-grafted-poly (ϵ -caprolactone)/alginate nanofibrous/macroporous scaffolds incorporated with nano-hydroxyapatite for bone tissue engineering. *Journal of Biomaterials Applications*. 2019;33(8):1128-44.
70. Hokmabad VR, Davaran S, Aghazadeh M, Alizadeh E, Salehi R, Ramazani A. Effect of incorporating *Elaeagnus angustifolia* extract in PCL-PEG-PCL nanofibers for bone tissue engineering. *Frontiers of Chemical Science and Engineering*. 2019;13(1):108-19.
71. Del Bakhshayesh AR, Asadi N, Alihemmati A, Tayefi Nasrabadi H, Montaseri A, Davaran S, et al. An overview of advanced biocompatible and biomimetic materials for creation of replacement structures in the musculoskeletal systems: Focusing on cartilage tissue engineering. *Journal of Biological Engineering*. 2019;13(1).
72. Ashjarian M, Babazadeh M, Akbarzadeh A, Davaran S, Salehi R. Stimuli-responsive polyvinylpyrrolidone-NIPPA_m-lysine graphene oxide nano-hybrid as an anticancer drug delivery on MCF7 cell line. *Artificial Cells, Nanomedicine and Biotechnology*. 2019;47(1):443-54.
73. Asadi N, Alizadeh E, Rahmani Del Bakhshayesh A, Mostafavi E, Akbarzadeh A, Davaran S. Fabrication and in Vitro Evaluation of Nanocomposite Hydrogel Scaffolds Based on Gelatin/PCL-PEG-PCL for Cartilage Tissue Engineering. *ACS Omega*. 2019;4(1):449-57.

74. Arteshi Y, Mohammad Hoseinpour P, Davaran S, editors. Functional improvement of rabbit mesenchymal stem cells by electrical stimulation using a nano-structured poly aniline/sulfonated cyclodextrin scaffold. *Materials Today: Proceedings*; 2019.
75. Amani H, Mostafavi E, Arzaghi H, Davaran S, Akbarzadeh A, Akhavan O, et al. Three-Dimensional Graphene Foams: Synthesis, Properties, Biocompatibility, Biodegradability, and Applications in Tissue Engineering. *ACS Biomaterials Science and Engineering*. 2019;5(1):193-214.
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