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Research Areas

Natural Sciences

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **In situ synthesis of silver nanoparticles as a facile strategy to prepare PCL scaffolds with antibacterial activity for a potential treatment for decubitus ulcers**
Bayrak E., Forough M., Tutumlu Z., Eroğul O.
Journal of Materials Research, vol.39, no.14, pp.2067-2081, 2024 (SCI-Expanded)
- II. **Fluorometric and colorimetric platforms for rapid and sensitive hydroxychloroquine detection in aqueous samples**
Doğan K., Ünal Taş D., Persil Çetinkol Ö., Forough M.
Talanta, vol.270, 2024 (SCI-Expanded)
- III. **Enhanced carbohydrate-based plastic performance by incorporating cerium-based metal-organic framework for food packaging application**
Jafarzadeh S., Gologli M., Azizi-Lalabadi M., Farahbakhsh J., Forough M., Rabiee N., Zargar M.
International Journal of Biological Macromolecules, vol.265, 2024 (SCI-Expanded)
- IV. **Green synthesis of nanomaterials for smart biopolymer packaging: challenges and outlooks**
Jafarzadeh S., Nooshkam M., Zargar M., Garavand F., Ghosh S., Hadidi M., Forough M.
JOURNAL OF NANOSTRUCTURE IN CHEMISTRY, vol.14, no.2, pp.113-136, 2024 (SCI-Expanded)
- V. **Advanced technologies in biodegradable packaging using intelligent sensing to fight food waste**
Jafarzadeh S., Yildiz Z., Yildiz P., Strachowski P., Forough M., Esmaeili Y., Naebe M., Abdollahi M.
International Journal of Biological Macromolecules, vol.261, 2024 (SCI-Expanded)
- VI. **Improving the functionality of biodegradable food packaging materials via porous nanomaterials**
Jafarzadeh S., Forough M., Kouzegaran V. J., Zargar M., Garavand F., Azizi-Lalabadi M., Abdollahi M., Jafari S. M.
Comprehensive Reviews in Food Science and Food Safety, vol.22, no.4, pp.2850-2886, 2023 (SCI-Expanded)
- VII. **Electrochemical detection of Oxaliplatin induced DNA damage in G-quadruplex structures**
Osmanoğulları S. C., FOROUGH M., PERSİL ÇETİNKOL Ö., UDUM Y., Toppare L.
ANALYTICAL BIOCHEMISTRY, vol.671, 2023 (SCI-Expanded)
- VIII. **Plant protein-based nanocomposite films: A review on the used nanomaterials, characteristics, and food packaging applications.**
Jafarzadeh S., FOROUGH M., Amjadi S., Javan Kouzegaran V., Almasi H., Garavand F., Zargar M.

Critical reviews in food science and nutrition, vol.63, no.29, pp.9667-9693, 2023 (SCI-Expanded)

- IX. **Application of bacterial nanocellulose decorated with zeolitic imidazolate framework (ZIF-L) as a platform for food freshness monitoring**
Molaei R., Moradi M., Kahyaoğlu L. N., Forough M.
International Journal of Biological Macromolecules, vol.223, pp.713-721, 2022 (SCI-Expanded)
- X. **Coumarin 6H-fused fluorescent probe for highly sensitive detection of coralyne using oligonucleotide-modified silver nanoparticles.**
Usta H. M., Forough M., Persil Çetinkol Ö.
Analytical and bioanalytical chemistry, vol.414, no.24, pp.7299-7313, 2022 (SCI-Expanded)
- XI. **Renewable and Recyclable Polymeric Materials for Food Packaging: A New Open Special Issue in *Materials*.**
Jafarzadeh S., Zargar M., Forough M.
Materials (Basel, Switzerland), vol.15, no.17, 2022 (SCI-Expanded)
- XII. **Plant protein-based food packaging films; recent advances in fabrication, characterization, and applications**
Hadidi M., Jafarzadeh S., FOROUGH M., Garavand F., Alizadeh S., Salehabadi A., Khaneghah A. M., Jafari S. M.
Trends in Food Science and Technology, vol.120, pp.154-173, 2022 (SCI-Expanded)
- XIII. **The control of fungi and mycotoxins by food active packaging: a review**
Jafarzadeh S., Hadidi M., Forough M., Nafchi A. M., Khaneghah A. M.
CRITICAL REVIEWS IN FOOD SCIENCE AND NUTRITION, vol.63, no.23, pp.1549-7852, 2022 (SCI-Expanded)
- XIV. **The role of genetic manipulation and in situ modifications on production of bacterial nanocellulose: A review**
Moradi M., Jacek P., Farhangfar A., Guimarães J. T., FOROUGH M.
International Journal of Biological Macromolecules, vol.183, pp.635-650, 2021 (SCI-Expanded)
- XV. **Highly-sensitive and fast detection of human telomeric G-Quadruplex DNA based on a hemin-conjugated fluorescent metal-organic framework platform**
Javan Kouzegaran V., Farhadi K., Forough M., Bahram M., Persil Çetinkol Ö.
Biosensors and Bioelectronics, vol.178, 2021 (SCI-Expanded)
- XVI. **Construction of amperometric biosensor modified with conducting polymer/carbon dots for the analysis of catechol**
Yasa M., Deniz A., Forough M., YILDIRIM E., PERSİL ÇETİNKOL Ö., Udum Y. A., TOPPARE L. K.
Journal of Polymer Science, vol.58, no.23, pp.3336-3348, 2020 (SCI-Expanded)
- XVII. **Novel fluorescent azacyanine compounds: Improved synthesis and optical properties**
Doğan K., Gülkaya A., Forough M., Persil Ç.
ACS Omega, vol.5, no.36, pp.22874-22882, 2020 (SCI-Expanded)
- XVIII. **A conjugated gold nanoparticle-azacyanine off-on-off fluorescence probe for sensitive and selective detection of G-quadruplexes**
Bilgen E., Forough M., PERSİL ÇETİNKOL Ö.
Talanta, vol.217, 2020 (SCI-Expanded)
- XIX. **Silver nanoparticles-tragacanth gel as a green membrane for effective extraction and determination of capecitabine**
Hajizadeh S., Farhadi K., Molaei R., Forough M.
Journal of Separation Science, vol.43, no.13, pp.2666-2674, 2020 (SCI-Expanded)
- XX. **Development of an easy-to-use colorimetric pH label with starch and carrot anthocyanins for milk shelf life assessment**
Goodarzi M. M., Moradi M., Tajik H., Forough M., Ezati P., Kuswandi B.
International Journal of Biological Macromolecules, vol.153, pp.240-247, 2020 (SCI-Expanded)
- XXI. **Application of novel Fe₃O₄-g-GO-g-RAFT agent nanoabsorbents for D-SPME of biogenic amines in smoked fish**
Molaei R., Tajik H., Moradi M., Forough M.
Journal of Food Composition and Analysis, vol.87, 2020 (SCI-Expanded)

- XXII. **Azacyanines as novel topoisomerase II alpha inhibitors**
Guloglu S., Kirmaci F. N., PERSİL ÇETİNKOL Ö., Forough M., Gulkaya A.
Letters in Drug Design and Discovery, vol.17, no.5, pp.664-669, 2020 (SCI-Expanded)
- XXIII. **A DNA-free colorimetric probe based on citrate-capped silver nanoparticles for sensitive and rapid detection of coralyne**
Usta H. M., Forough M., Cetinkol Ö.
Sensors and Actuators, B: Chemical, vol.298, 2019 (SCI-Expanded)
- XXIV. **A novel pH-sensing indicator based on bacterial cellulose nanofibers and black carrot anthocyanins for monitoring fish freshness**
Moradi M., Tajik H., Almasi H., Forough M., Ezati P.
Carbohydrate Polymers, vol.222, 2019 (SCI-Expanded)
- XXV. **Cellulose/chitosan pH-responsive indicator incorporated with carrot anthocyanins for intelligent food packaging**
Tirtashi F. E., Moradi M., Tajik H., Forough M., Ezati P., Kuswandi B.
International Journal of Biological Macromolecules, vol.136, pp.920-926, 2019 (SCI-Expanded)
- XXVI. **In-situ synthesis of silver nanoparticles on porous silicon nanostructure through galvanic displacement reaction and its application in construction of glucose screen printed sensor**
Allahnouri F., Farhadi K., Eskandari H., Molaei R., Abarghoui M. M., Forough M.
MICRO & NANO LETTERS, vol.13, no.10, pp.1431-1436, 2018 (SCI-Expanded)
- XXVII. **Nanostructured chitosan/monolaurin film: Preparation, characterization and antimicrobial activity against Listeria monocytogenes on ultrafiltered white cheese**
Lotfi M., Tajik H., Moradi M., Forough M., Divsalar E., Kuswandi B.
LWT-FOOD SCIENCE AND TECHNOLOGY, vol.92, pp.576-583, 2018 (SCI-Expanded)
- XXVIII. **Characterization of cellulosic paper coated with chitosan-zinc oxide nanocomposite containing nisin and its application in packaging of UF cheese**
Divsalar E., Tajik H., Moradi M., Forough M., Lotfi M., Kuswandi B.
INTERNATIONAL JOURNAL OF BIOLOGICAL MACROMOLECULES, vol.109, pp.1311-1318, 2018 (SCI-Expanded)
- XXIX. **Rapid ionic liquid-supported nano-hybrid composite reinforced hollow-fiber electromembrane extraction followed by field-amplified sample injection-capillary electrophoresis: An effective approach for extraction and quantification of Imatinib mesylate in human plasma**
Forough M., Farhadi K., Eyshi A., Molaei R., Khalili H., Kouzegaran V. J., Matin A. A.
JOURNAL OF CHROMATOGRAPHY A, vol.1516, pp.21-34, 2017 (SCI-Expanded)
- XXX. **Physical, antimicrobial and antibiofilm properties of Zataria multiflora Boiss essential oil nanoemulsion**
Shahabi N., Tajik H., Moradi M., Forough M., Ezati P.
INTERNATIONAL JOURNAL OF FOOD SCIENCE AND TECHNOLOGY, vol.52, no.7, pp.1645-1652, 2017 (SCI-Expanded)
- XXXI. **Capillary electrophoresis with online stacking in combination with AgNPs@MCM-41 reinforced hollow fiber solid-liquid phase microextraction for quantitative analysis of Capecitabine and its main metabolite 5-Fluorouracil in plasma samples isolated from cancer patients**
Forough M., Farhadi K., Molaei R., Khalili H., Shakeri R., Zamani A., Matin A. A.
JOURNAL OF CHROMATOGRAPHY B-ANALYTICAL TECHNOLOGIES IN THE BIOMEDICAL AND LIFE SCIENCES, vol.1040, pp.22-37, 2017 (SCI-Expanded)
- XXXII. **Silver nanoparticles as a new colorimetric probe for determination of oxalic acid in urine**
Basharhad P. F., Farhadi K., Forough M., Molaei R.
Sensor Letters, vol.14, no.9, pp.906-912, 2016 (SCI-Expanded)
- XXXIII. **Development of novel Ag/bauxite nanocomposite as a heterogeneous catalyst for biodiesel production**
Bet-Moushoul E., Farhadi K., Mansourpanah Y., Molaie R., Forough M., Nikbakht A. M.
RENEWABLE ENERGY, vol.92, pp.12-21, 2016 (SCI-Expanded)
- XXXIV. **Determination of phenolic compounds content and antioxidant activity in skin, pulp, seed, cane and**

leaf of five native grape cultivars in West Azerbaijan province, Iran

Farhadi K, Esmailzadeh F, Hatami M, Forough M, Molaie R.
FOOD CHEMISTRY, vol.199, pp.847-855, 2016 (SCI-Expanded)

- XXXV. **Application of CaO-based/Au nanoparticles as heterogeneous nanocatalysts in biodiesel production**
Bet-Moushoul E, Farhadi K, Mansourpanah Y, Nikbakht A. M., Molaei R, Forough M.
FUEL, vol.164, pp.119-127, 2016 (SCI-Expanded)
- XXXVI. **The AgcorePdshell bimetallic nanoparticles: simple biological synthesis and characterization**
Farhadi K, Sabzi R. E., Forough M., Pourhossein A, Molaei R., Ebrahimi R.
JOURNAL OF THE IRANIAN CHEMICAL SOCIETY, vol.12, no.11, pp.2015-2021, 2015 (SCI-Expanded)
- XXXVII. **Biosynthetic Route for the Preparation of Nonregular Gold Nanoparticles Using Aqueous Extracted of Nettle (*Urtica dioica* L.) Plant**
Molaei R., Farhadi K., Forough M., Pourhossein A.
SYNTHESIS AND REACTIVITY IN INORGANIC METAL-ORGANIC AND NANO-METAL CHEMISTRY, vol.45, no.10, pp.1489-1494, 2015 (SCI-Expanded)
- XXXVIII. **Highly sensitive and selective colorimetric probe for determination of L-cysteine in aqueous media based on Ag/Pd bimetallic nanoparticles**
Farhadi K, Forough M., Pourhossein A, Molaei R.
SENSORS AND ACTUATORS B-CHEMICAL, vol.202, pp.993-1001, 2014 (SCI-Expanded)
- XXXIX. **Amperometric biosensor for cholesterol based on novel nanocomposite array gold nanoparticles/acetone-extracted propolis/multiwall carbon nanotubes/gold**
Molaei R., Sabzi R. E., Farhadi K., Kheiri F., Forough M.
MICRO & NANO LETTERS, vol.9, no.2, pp.100-104, 2014 (SCI-Expanded)
- XL. **Biosynthesis of Highly Dispersed Palladium Nanoparticles Using Astragalmanna Aqueous Extract**
Farhadi K, Pourhossein A., Forough M., Molaei R., Abdi A., Siyami A.
JOURNAL OF THE CHINESE CHEMICAL SOCIETY, vol.60, no.9, pp.1144-1149, 2013 (SCI-Expanded)
- XLI. **Dispersive liquid-liquid microextraction of propranolol enantiomers from human plasma based on the solidification of a floating organic droplet**
Farhadi K, Hatami M., Forough M., Molaei R.
BIOANALYSIS, vol.5, no.6, pp.701-710, 2013 (SCI-Expanded)
- XLII. **Silver nanoparticles in the presence of Ca²⁺ as a selective and sensitive probe for the colorimetric detection of cysteine**
Hajizadeh S., Farhadi K., Forough M., Molaei R.
ANALYTICAL METHODS, vol.4, no.6, pp.1747-1752, 2012 (SCI-Expanded)
- XLIII. **Highly selective Hg²⁺ colorimetric sensor using green synthesized and unmodified silver nanoparticles**
Farhadi K, Forough M., Molaei R., Hajizadeh S., Rafipour A.
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- XLIV. **Silver nanoparticles as a cyanide colorimetric sensor in aqueous media**
Hajizadeh S., Farhadi K., Forough M., Sabzi R. E.
ANALYTICAL METHODS, vol.3, no.11, pp.2599-2603, 2011 (SCI-Expanded)

Articles Published in Other Journals

- I. **Green Biological Fabrication and Characterization of Highly Monodisperse Palladium Nanoparticles Using Pistacia Atlantica Fruit Broth**
Molaie R., Farhadi K., Forough M., Hajizadeh S.
JOURNAL OF NANOSTRUCTURES, vol.8, no.1, pp.47-54, 2018 (ESCI)
- II. **Biological and green synthesis of silver nanoparticles**
Forough M., Khalil F.
Turkish Journal of Engineering and Environmental Sciences, vol.34, no.4, pp.281-287, 2010 (Scopus)

Books & Book Chapters

- I. **Disposable paper-based sensors**
Bilgen E., Suvaci Z., Persil Çetinkol Ö., Forough M.
in: Fundamentals of Sensor Technology Principles and Novel Designs, Ahmed Barhoum and Zeynep Altintas, Editor, Elsevier Science, Oxford/Amsterdam , New York, pp.803-860, 2023
- II. **Biosensors for nucleic acid detection**
Forough M.
in: Advanced Sensor Technology Biomedical, Environmental, and Construction Applications, Ahmed Barhoum and Zeynep Altintas, Editor, Elsevier Science, Oxford/Amsterdam , Ankara, pp.1-917, 2023
- III. **Hydrogels: Properties, Preparation, Characterization and Biomedical, Applications in Tissue Engineering, Drug, Delivery and Wound Care**
Forough M.
in: Advanced Healthcare Materials, Ashutosh Tiwari, Editor, Wiley-VCH Verlag Weinheim GmbH , London, pp.295-357, 2014

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