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Research Areas

Natural Sciences

Published journal articles indexed by SCI, SSCI, and AHCI

I. **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)

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. **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)

IV. **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.
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V. **Electrochemical detection of Oxaliplatin induced DNA damage in G-quadruplex structures**
Osmanoğulları S. C., FOROUGH M., PERSİL ÇETİNKOL Ö., UDUM Y., Toppare L.
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VI. **Plant protein-based nanocomposite films: A review on the used nanomaterials, characteristics, and food packaging applications.**
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VII. **Application of bacterial nanocellulose decorated with zeolitic imidazolate framework (ZIF-L) as a platform for food freshness monitoring**
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VIII. **Coumarin 6H-fused fluorescent probe for highly sensitive detection of coralyne using oligonucleotide-modified silver nanoparticles.**
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IX. **Renewable and Recyclable Polymeric Materials for Food Packaging: A New Open Special Issue in Materials.**
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Materials (Basel, Switzerland), vol.15, no.17, 2022 (SCI-Expanded)

X. **Plant protein-based food packaging films; recent advances in fabrication, characterization, and applications**
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Trends in Food Science and Technology, vol.120, pp.154-173, 2022 (SCI-Expanded)

XI. **The control of fungi and mycotoxins by food active packaging: a review**
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XII. **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.
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XV. **Novel fluorescent azacyanine compounds: Improved synthesis and optical properties**
Doğan K., Gülkaya A., Forough M., Persil Ç.
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XVI. **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.
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XVII. **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)

XVIII. **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.
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Molaei R., Tajik H., Moradi M., Forough M.
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XX. **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)

XXI. **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.
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XXII. **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)

XXIII. **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)

XXIV. **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)

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XXVII. **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.
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XXVIII. **Physical, antimicrobial and antibiofilm properties of Zataria multiflora Boiss essential oil nanoemulsion**
Shahabi N., Tajik H., Moradi M., Forough M., Ezati P.
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XXIX. **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**
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XXX. **Silver nanoparticles as a new colorimetric probe for determination of oxalic acid in urine**
Basharzad P. F., Farhadi K., Forough M., Molaei R.
Sensor Letters, vol.14, no.9, pp.906-912, 2016 (SCI-Expanded)

XXXI. **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.
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XXXII. **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., Esmaeilzadeh F., Hatami M., Forough M., Molaie R.
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XXXIII. **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)

XXXIV. **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)

XXXV. **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)

XXXVI. **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.
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XXXVII. **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.
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Farhadi K., Pourhossein A., Forough M., Molaei R., Abdi A., Siyami A.
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XXXIX. **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.
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XL. **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.
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Farhadi K., Forough M., Molaei R., Hajizadeh S., Rafipour A.
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Molaie R., Farhadi K., Forough M., Hajizadeh S.
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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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