

Prof. Dr. FİLİZ KURALAY

Kişisel Bilgiler

E-posta: filizkur@hacettepe.edu.tr

Diğer E-posta: kuralay.filiz@gmail.com

Web: <https://avesis.hacettepe.edu.tr/filizkur>

Uluslararası Araştırmacı ID'leri

ORCID: 0000-0003-0353-9692

Yoksis Araştırmacı ID: 111830

Eğitim Bilgileri

Doktora, Hacettepe Üniversitesi, Fen Bilimleri Enstitüsü, Kimya, Türkiye 2003 - 2009

Yüksek Lisans, Hacettepe Üniversitesi, Fen Bilimleri Enstitüsü, Kimya, Türkiye 2001 - 2003

Lisans, Hacettepe Üniversitesi, Fen Fakültesi, Kimya, Türkiye 1996 - 2001

Araştırma Alanları

Kimya, Analitik Kimya, Biyoanalitik Yöntemler, Elektroanalitik Yöntemler, Sensörler, Temel Bilimler

Akademik Unvanlar / Görevler

Prof. Dr., Hacettepe Üniversitesi, Fen Fakültesi, Kimya Bölümü, 2021 - Devam Ediyor

Doç. Dr., Hacettepe Üniversitesi, Fen Fakültesi, Kimya Bölümü, 2019 - 2021

SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

- I. **Janus Micromotors Based on Fe₃O₄ and Fe₃O₄-OH for miRNA-21 Biosensing**
KARACA G., ÖKSÜZ L., Koc U., KURALAY F., ÖKSÜZ A.
JOURNAL OF INORGANIC AND ORGANOMETALLIC POLYMERS AND MATERIALS, 2024 (SCI-Expanded)
- II. **The role of nanoparticles in non-invasive electrochemical immunosensor technology and recent developments**
Sanko V., Erkmen C., KURALAY F.
Electroanalysis, 2024 (SCI-Expanded)
- III. **Atomic layer deposited zinc oxide thin film on pencil graphite for DNA sensor applications**
Güngör M. A., Alev O., Kaya H. K., Arslan L. Ç., Büyükköse S., Öztürk Z. Z., KURALAY F.
Materials Today Communications, cilt.36, 2023 (SCI-Expanded)
- IV. **Label-Free Electrochemical Biosensor Platforms for Cancer Diagnosis: Recent Achievements and Challenges**
Sanko V., KURALAY F.
Biosensors, cilt.13, sa.3, 2023 (SCI-Expanded)
- V. **Achievements of Graphene and Its Derivatives Materials on Electrochemical Drug Assays and Drug-DNA Interactions**

Imanzadeh H., Bakirhan N. K., KURALAY F., Amiri M., ÖZKAN S. A.

Critical Reviews in Analytical Chemistry, cilt.53, sa.6, ss.1263-1284, 2023 (SCI-Expanded)

- VI. **Catalytic Au/PEDOT/Pt micromotors for cancer biomarker detection and potential breast cancer treatment**
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APPLIED NANOSCIENCE, cilt.13, sa.1, ss.367, 2023 (SCI-Expanded)
- VII. **Paclitaxel-conjugated phenylboronic acid-enriched catalytic robots as smart drug delivery systems**
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- VIII. **WS2 integrated PEDOT:PSS interface as a sensitive and selective voltammetric epirubicin detection platform and a functional actuator**
Gungor M. A., Kaya H. K., KURALAY F.
SURFACES AND INTERFACES, cilt.30, 2022 (SCI-Expanded)
- IX. **Platinum nanoparticles loaded carbon black: reduced graphene oxide hybrid platforms for label-free electrochemical DNA and oxidative DNA damage sensing**
Kaya H. K., Haghmoradi N., Kaplan B. Y., KURALAY F.
JOURNAL OF ELECTROANALYTICAL CHEMISTRY, cilt.910, 2022 (SCI-Expanded)
- X. **Nucleic Acid Integrated Technologies for Electrochemical Point-of-Care Diagnostics: A Comprehensive Review**
SÜRÜCÜ Ö., ÖZTÜRK E., KURALAY F.
ELECTROANALYSIS, cilt.34, sa.2, ss.148-160, 2022 (SCI-Expanded)
- XI. **Graphene supported poly(3-aminophenylboronic acid) surface via constant potential electrolysis for facile and sensitive paracetamol determination**
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- XII. **Chitosan functionalized gold-nickel bimetallic magnetic nanomachines for motion-based deoxyribonucleic acid recognition**
Karaca G. Y., Kaya H. K., KURALAY F., ÖKSÜZ A.
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- XIII. **A novel design thia-bilane structure-based molecular imprinted electrochemical sensor for sensitive and selective dopamine determination**
Kaya H. K., Cinar S., Altundal G., Bayramli Y., ÜNALEROĞLU C., KURALAY F.
SENSORS AND ACTUATORS B-CHEMICAL, cilt.346, 2021 (SCI-Expanded)
- XIV. **Designing functional materials: DNA/Poly(3,4-ethylenedioxythiophene) interfaces for advanced DNA direct electrochemistry and DNA-Drug interaction detection**
KURALAY F., Dukar N., Bayramli Y.
MATERIALS SCIENCE AND ENGINEERING B-ADVANCED FUNCTIONAL SOLID-STATE MATERIALS, cilt.272, 2021 (SCI-Expanded)
- XV. **MoS₂/Chitosan/GOx-Gelatin modified graphite surface: Preparation, characterization and its use for glucose determination**
BAL ALTUNTAŞ D., KURALAY F.
MATERIALS SCIENCE AND ENGINEERING B-ADVANCED FUNCTIONAL SOLID-STATE MATERIALS, cilt.270, 2021 (SCI-Expanded)
- XVI. **Electrochemical Determination of Mitomycin C and Its Interaction with Double-Stranded DNA Using a Poly(o-phenylenediamine)-Multi-Walled Carbon Nanotube Modified Pencil Graphite Electrode**
KURALAY F., Bayramli Y.
ANALYTICAL LETTERS, cilt.54, sa.8, ss.1295-1308, 2021 (SCI-Expanded)
- XVII. **Gold-Nickel Nanowires as Nanomotors for Cancer Marker Biodetection and Chemotherapeutic Drug Delivery**
Karaca G. Y., KURALAY F., Uygun E., Ozaltin K., Demirbükten S. E., GARİPCAN B., ÖKSÜZ L., ÖKSÜZ A.

- ACS APPLIED NANO MATERIALS, cilt.4, sa.4, ss.3377-3388, 2021 (SCI-Expanded)
- XVIII. Current status of micro/nanomotors in drug delivery**
Tezel G., TİMUR S. S., KURALAY F., GÜRSOY R. N., ULUBAYRAM K., ÖNER L., EROĞLU H.
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- XIX. Fabrication of self-functionalized polymeric surfaces and their application in electrochemical acetaminophen detection**
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JOURNAL OF APPLIED POLYMER SCIENCE, cilt.137, sa.48, 2020 (SCI-Expanded)
- XX. Ultrathin polypyrrole films on self-assembled monolayers as an efficient ultramicroelectrode assay**
BOLAT G., YAMAN Y. T., KURALAY F., ABACI S.
JOURNAL OF APPLIED POLYMER SCIENCE, cilt.137, sa.43, 2020 (SCI-Expanded)
- XXI. Direct Electrochemistry and Sensitive Detection of Guanosine on Nanopolymeric Surfaces Bearing Boronic Acid Groups**
KURALAY F., Gursoy T.
CHEMISTRYSELECT, cilt.5, sa.29, ss.9134-9142, 2020 (SCI-Expanded)
- XXII. Polypyrrole-Based Nanohybrid Electrodes: Their Preparation and Potential Use for DNA Recognition and Paclitaxel Quantification**
KURALAY F., Dukar N.
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- XXIII. Electroactive polyglycine coatings for nanobiosensing applications: Label-free DNA hybridization, DNA-Antitumor agent interaction and antitumor agent determination**
Gursoy S., Dukar N., YAMAN Y. T., Abaci S., Kuralay F.
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- XXIV. Highly sensitive and selective dopamine sensing in biological fluids with one-pot prepared graphene/poly(o-phenylenediamine) modified electrodes**
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- XXV. Determination of hydrogen peroxide with an enzymeless amperometric sensor based on poly(vinylferrocene)-supported Ag nanoparticles**
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Turkish Journal Of Chemistry, cilt.42, ss.1755-1767, 2018 (SCI-Expanded)
- XXVI. Poly-L-lysine Coated Surfaces for Ultrasensitive Nucleic Acid Detection**
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- XXVII. Preparation of self-propelled Cu-Pt micromotors and their application in miRNA monitoring**
ÖKSÜZ L., Karaca G. Y., KURALAY F., UYGUN E., KOÇ İ. Ü., ÖKSÜZ A.
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- XXVIII. Synergistic tungsten oxide/organic framework hybrid nanofibers for electrochromic device application**
Dulgerbaki C., Komur A. I., Maslakci N. N., Kuralay F., Oksuz A. U.
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- XXIX. Electrochemical bacterial detection using poly(3-aminophenylboronic acid)-based imprinted polymer**
Golabi M., Kuralay F., Jager E. W. H., Beni V., Turner A. P. F.
BIOSENSORS & BIOELECTRONICS, cilt.93, ss.87-93, 2017 (SCI-Expanded)
- XXX. Biosensing applications of titanium dioxide coated graphene modified disposable electrodes**
Kuralay F., Tunc S., Bozduman F., ÖKSÜZ L., Oksuz A. U.
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- XXXI. Polymer/carbon nanotubes coated graphite surfaces for highly sensitive nitrite detection**
Kuralay F., Dumangoz M., Tunc S.
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- XXXII. **Ultrasound-Propelled Nanoporous Gold Wire for Efficient Drug Loading and Release**
GARCIA-GRADILLA V., SATTAYASAMITSATHIT S., SOTO F., KURALAY F., Yardimci C., WIITALA D., GALARNYK M., WANG J.
SMALL, cilt.10, sa.20, ss.4154-4159, 2014 (SCI-Expanded)
- XXXIII. **Functionalized Ultrasound-Propelled Magnetically Guided Nanomotors: Toward Practical Biomedical Applications**
Garcia-Gradilla V., Orozco J., Sattayasamitsathit S., Soto F., Kuralay F., Pourazary A., Katzenberg A., Gao W., SHEN Y., Wang J.
ACS NANO, cilt.7, sa.10, ss.9232-9240, 2013 (SCI-Expanded)
- XXXIV. **Self-Propelled Carbohydrate-Sensitive Microtransporters with Built-In Boronic Acid Recognition for Isolating Sugars and Cells**
Kuralay F., SATTAYASAMITSATHIT S., GAO W., UYGUN A., KATZENBERG A., WANG J.
JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, cilt.134, sa.37, ss.15217-15220, 2012 (SCI-Expanded)
- XXXV. **Single-walled carbon nanotubes-polymer modified graphite electrodes for DNA hybridization**
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- XXXVI. **Ternary Monolayer Interfaces for Ultrasensitive and Direct Bioelectronic Detection of Nucleic Acids in Complex Matrices**
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- XXXVII. **Multiplexed and switchable release of distinct fluids from microneedle platforms via conducting polymer nanoactuators for potential drug delivery**
Valdes-Ramirez G., Windmiller J. R., Claussen J. C., Martinez A. G., Kuralay F., Zhou M., Zhou N., Polsky R., Miller P. R., Narayan R., et al.
SENSORS AND ACTUATORS B-CHEMICAL, cilt.161, sa.1, ss.1018-1024, 2012 (SCI-Expanded)
- XXXVIII. **A novel polypyrrole-phenylboronic acid based electrochemical saccharide sensor**
Aytac S., Kuralay F., BOYACI İ. H., ÜNALEROĞLU C.
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- XXXIX. **Carbon nanotube-chitosan modified disposable pencil graphite electrode for Vitamin B-12 analysis**
KURALAY F., VURAL T., BAYRAM C., DENKBAŞ E. B., ABACI S.
COLLOIDS AND SURFACES B-BIOINTERFACES, cilt.87, sa.1, ss.18-22, 2011 (SCI-Expanded)
- XL. **Interaction of Mitomycin C with DNA Immobilized onto Single-walled Carbon Nanotube/Polymer Modified Pencil Graphite Electrode**
Canavar E., KURALAY F., ERDEM GÜRSAN K. A.
ELECTROANALYSIS, cilt.23, sa.10, ss.2343-2349, 2011 (SCI-Expanded)
- XLI. **Functionalized Micromachines for Selective and Rapid Isolation of Nucleic Acid Targets from Complex Samples**
Kagan D., Campuzano S., Balasubramanian S., Kuralay F., Flechsig G., Wang J.
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- XLII. **The Recent Electrochemical Biosensor Technologies for Monitoring of Nucleic Acid Hybridization**
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- XLIII. **Preparation and physical/electrochemical characterization of carbon nanotube-chitosan modified pencil graphite electrode**
VURAL T., KURALAY F., BAYRAM C., ABACI S., DENKBAŞ E. B.
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- XLIV. **Characterization of poly(vinylferrocenium) coated surfaces and their applications in DNA sensor technology**
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- XLV. **Tin oxide nanoparticles-polymer modified single-use sensors for electrochemical monitoring of**

label-free DNA hybridization

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- XLVI. **Characterization of redox polymer based electrode and electrochemical behavior for DNA detection**
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ANALYTICA CHIMICA ACTA, cilt.643, ss.83-89, 2009 (SCI-Expanded)
- XLVII. **Poly(vinylferrocenium) coated disposable pencil graphite electrode for DNA hybridization**
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- XLVIII. **Indicator-based and indicator-free magnetic assays connected with disposable electrochemical nucleic acid sensor system**
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- XLIX. **Electrochemical Biosensing of DNA Immobilized Poly(Vinylferrocenium) Modified Electrode**
KURALAY F., ERDEM GÜRSAN K. A., ABACI S., OZYORUK H., YILDIZ A.
ELECTROANALYSIS, cilt.20, sa.23, ss.2563-2570, 2008 (SCI-Expanded)
- L. **Constant current chronopotentiometry and voltammetry of native and denatured serum albumin at mercury and carbon electrodes**
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ELECTROANALYSIS, cilt.20, sa.13, ss.1406-1413, 2008 (SCI-Expanded)
- LI. **Inhibitive determination of Hg²⁺ ion by an amperometric urea biosensor using poly(vinylferrocenium) film**
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Kitap & Kitap Bölümleri

- I. **Chapter 15: Multifunctional therapeutic hybrid nanocarriers for targeted and triggered drug delivery: recent trends and future prospects**
KURTAY G., YILMAZ M., KURALAY F., DEMİREL G.
Nanostructures for Drug Delivery, Ecaterina Andronescu and Alexandru Mihai Grumezescu, Editör, Elsevier, ss.461-493, 2017

Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar

- I. **The Effect of The Segment Construction on The Motion Ability of Magnetic Motors**
ÖZTÜRK E., KURALAY F.
NanoTR-16, Türkiye, 05 Eylül 2022

Metrikler

Yayın: 53

Atf (WoS): 1041

Atf (Scopus): 700

H-İndeks (WoS): 17

H-İndeks (Scopus): 11

Ödüller

Kuralay F., TÜBİTAK Teşvik Ödülü-2017, Tübitak, Aralık 2018

Akademi Dışı Deneyim

Department of Physics Chemistry and Biology, Linköping University

Nanoengineering Department, University of California, San Diego

Nanoengineering Department, University of California, San Diego

Institute of Biophysics, Czech Academy of Science