

Assoc. Prof. GÜLÇİN BOLAT TOPÇU

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International Researcher IDs

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Education Information

Doctorate, Hacettepe University, Fen Bilimleri Enstitüsü, Kimya, Turkey 2011 - 2016

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Pestisit tayini için elektrokimyasal nanosensörlerin hazırlanması ve uygulamaları, Hacettepe Üniversitesi, Fen Fakültesi, Kimya Bölümü, 2016

Postgraduate, Hemoglobinin elektrokimyasal davranışının incelenmesi, Hacettepe Üniversitesi, Fen Fakültesi, Kimya Bölümü, 2011

Research Areas

Chemistry, Analytical Chemistry, Electromagnetic Methods, Natural Sciences

Academic Titles / Tasks

Assistant Professor, Hacettepe University, Fen Fakültesi, Kimya Bölümü, 2019 - Continues

Research Assistant, Hacettepe University, Fen Fakültesi, Kimya Bölümü, 2008 - 2019

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Controllable synthesis of Ag₂Se binary thin-film via electrochemical atomic layer epitaxy (ECALE) and its characterization**
Bolat G., Yaman Y. T., Dede E. K., ABACI S.
Materials Chemistry and Physics, vol.318, 2024 (SCI-Expanded)
- II. **Fabrication of ternary Cu-Sb-Te thin films by electrochemical co-deposition strategy at one-stage process**
Yaman Y. T., Bolat G., Aydın Z. Y., ABACI S.

Journal of Solid State Electrochemistry, vol.27, no.10, pp.2761-2770, 2023 (SCI-Expanded)

- III. **Fabrication of trastuzumab conjugated curcumin nanoparticles based impedimetric cytosensor for the cancer cell detection**
Tugce Yaman Y., AKBAL VURAL Ö., Bolat G., ABACI S.
Microchemical Journal, vol.191, 2023 (SCI-Expanded)
- IV. **Electrosynthesis of poly (4-amino-3-nitrostyrene) film and its characterization**
BOLAT TOPÇU G., YAMAN Y. T., AKBAL VURAL Ö., ABACI S., UZUN C.
JOURNAL OF APPLIED ELECTROCHEMISTRY, vol.53, no.2, pp.227-240, 2023 (SCI-Expanded)
- V. **Peptide nanotubes/self-assembled polydopamine molecularly imprinted biochip for the impedimetric detection of human Interleukin-6**
YAMAN Y. T., AKBAL VURAL Ö., BOLAT G., ABACI S.
BIOELECTROCHEMISTRY, vol.145, 2022 (SCI-Expanded)
- VI. **Peptide nanotube functionalized molecularly imprinted polydopamine based single-use sensor for impedimetric detection of malathion**
YAMAN Y. T., BOLAT G., ABACI S., Saygin T. B.
ANALYTICAL AND BIOANALYTICAL CHEMISTRY, vol.414, no.2, pp.1115-1128, 2022 (SCI-Expanded)
- VII. **Human Serum Albumin-Gold Nanoparticle Based Impedimetric Sensor for Sensitive Detection of miRNA-200c**
Akbal Vural Ö., Yaman Y. T., Bolat G., Abacı S.
ELECTROANALYSIS, vol.33, no.4, pp.925-935, 2021 (SCI-Expanded)
- VIII. **Label-Free impedimetric miRNA-192 genosensor platform using graphene oxide decorated peptide nanotubes composite**
Bolat G., Akbal Vural Ö., Yaman Y. T., Abacı S.
MICROCHEMICAL JOURNAL, vol.106218, pp.106218, 2021 (SCI-Expanded)
- IX. **Molecularly imprinted label-free sensor platform for impedimetric detection of 3-monochloropropane-1,2-diol**
YAMAN Y. T., BOLAT G., Saygin T. B., ABACI S.
SENSORS AND ACTUATORS B-CHEMICAL, vol.328, 2021 (SCI-Expanded)
- X. **Polydopamine nanoparticles-assisted impedimetric sensor towards label-free lung cancer cell detection**
Bolat G., Akbal Vural Ö., Yaman Y. T., Abacı S.
MATERIALS SCIENCE & ENGINEERING C-MATERIALS FOR BIOLOGICAL APPLICATIONS, vol.119, 2021 (SCI-Expanded)
- XI. **Investigation of poly(CTAB-MWCNTs) composite based electrochemical DNA biosensor and interaction study with anticancer drug Irinotecan**
BOLAT G.
MICROCHEMICAL JOURNAL, vol.159, 2020 (SCI-Expanded)
- XII. **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, vol.137, no.43, 2020 (SCI-Expanded)
- XIII. **One-pot synthesized gold nanoparticle-peptide nanotube modified disposable sensor for impedimetric recognition of miRNA 410**
Yaman Y. T., Akbal Vural Ö., Bolat G., Abacı S.
SENSORS AND ACTUATORS B-CHEMICAL, vol.320, 2020 (SCI-Expanded)
- XIV. **Folic acid conjugated Prussian blue nanoparticles: Synthesis, physicochemical characterization and targeted cancer cell sensing**
Akbal Vural Ö., Bolat G., Yaman Y. T., Abacı S.
Colloids And Surfaces B-Biointerfaces, vol.187, pp.110655, 2020 (SCI-Expanded)
- XV. **Molecular imprinted polymer based electrochemical sensor for selective detection of paraben**
Yucebas B. B., YAMAN Y. T., BOLAT G., ÖZGÜR E., UZUN L., ABACI S.
SENSORS AND ACTUATORS B-CHEMICAL, vol.305, 2020 (SCI-Expanded)

- XVI. **Molecularly imprinted electrochemical impedance sensor for sensitive dibutyl phthalate (DBP) determination**
Bolat G., Yaman Y. T., Abacı S.
SENSORS AND ACTUATORS B-CHEMICAL, vol.299, 2019 (SCI-Expanded)
- XVII. **Folic acid conjugated Prussian blue nanoparticles: Synthesis, physicochemical characterization and targeted cancer cell sensing**
AKBAL Ö., BOLAT G., YAMAN Y. T., ABACI S.
Colloids and Surfaces B: Biointerfaces, 2019 (SCI-Expanded)
- XVIII. **Peptide nanoparticles (PNPs) modified disposable platform for sensitive electrochemical cytosensing of DLD-1 cancer cells**
YAMAN Y. T., Akbal Ö., BOLAT G., BOZDOĞAN B., DENKBAŞ E. B., ABACI S.
Biosensors and Bioelectronics, vol.104, pp.50-57, 2018 (SCI-Expanded)
- XIX. **Non-Enzymatic Electrochemical Sensing of Malathion Pesticide in Tomato and Apple Samples Based on Gold Nanoparticles-Chitosan-Ionic Liquid Hybrid Nanocomposite**
Bolat G., Abacı S.
SENSORS, vol.18, no.3, 2018 (SCI-Expanded)
- XX. **Highly sensitive electrochemical assay for Bisphenol A detection based on poly (CTAB)/MWCNTs modified pencil graphite electrodes**
Bolat G., Yaman Y. T., Abacı S.
SENSORS AND ACTUATORS B-CHEMICAL, vol.255, pp.140-148, 2018 (SCI-Expanded)
- XXI. **Sensitive electrochemical detection of fenitrothion pesticide based on self-assembled peptide-nanotubes modified disposable pencil graphite electrode**
Bolat G., Abacı S., Vural T., Bozdoğan B., Denkbaş E. B.
JOURNAL OF ELECTROANALYTICAL CHEMISTRY, vol.809, pp.88-95, 2018 (SCI-Expanded)
- XXII. **An ionic liquid/bismuth film-modified sensor for the electrochemical detection of cefixime**
Yaman Y. T., Bolat G., Yardimci C., Abacı S.
TURKISH JOURNAL OF CHEMISTRY, vol.42, no.3, pp.826-839, 2018 (SCI-Expanded)
- XXIII. **Electrochemical behavior and voltammetric detection of fenitrothion based on a pencil graphite electrode modified with reduced graphene oxide (RGO)/poly(E)-1-(4(4-(phenylamino)phenyl)diazenyl)phenyl)ethanone (DPA) composite film**
SURUCU O., BOLAT G., ABACI S.
TALANTA, vol.168, pp.113-120, 2017 (SCI-Expanded)
- XXIV. **Preparation of gold nanoparticles/single-walled carbon nanotubes/polyaniline composite-coated electrode developed for DNA detection**
EKŞİN E., BOLAT G., KURALAY F., Erdem A., ABACI S.
POLYMER BULLETIN, vol.72, no.12, pp.3135-3146, 2015 (SCI-Expanded)
- XXV. **Electrochemistry of poly(5-phenyl dipyrromethane) and its characterization**
BOLAT G., Kuralay F., TEMELLİ B., ÜNALEROĞLU C., ABACI S.
POLYMER BULLETIN, vol.72, no.4, pp.867-879, 2015 (SCI-Expanded)
- XXVI. **Disposable pencil graphite electrode modified with peptide nanotubes for Vitamin B-12 analysis**
PALA B. B., VURAL T., Kuralay F., CIRAK T., BOLAT G., ABACI S., DENKBAŞ E. B.
APPLIED SURFACE SCIENCE, vol.303, pp.37-45, 2014 (SCI-Expanded)
- XXVII. **Electropolymerization of thiophene on gold nanoparticle modified electrode in aqueous media**
SURUCU O., BOLAT G., ABACI S.
JOURNAL OF ELECTROANALYTICAL CHEMISTRY, vol.701, pp.20-24, 2013 (SCI-Expanded)
- XXVIII. **Fabrication of a Polyaniline Ultramicroelectrode via a Self Assembled Monolayer Modified Gold Electrode**
BOLAT G., KURALAY F., EROĞLU G., ABACI S.
SENSORS, vol.13, no.7, pp.8079-8094, 2013 (SCI-Expanded)
- XXIX. **Determination of lidocaine based on electrocatalysis of a chemically modified electrode**
Tan G., BOLAT G., ONUR M. A., ABACI S.

Articles Published in Other Journals

- Clay-Protein Nanocomposite Based Electrochemical Sensor for the Determination of Ascorbic Acid**
Akbal Vural Ö., Bolat G., Abacı S.
Süleyman Demirel Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.24, no.1, pp.80-89, 2020 (Peer-Reviewed Journal)

Books & Book Chapters

- Ultramicroelectrodes (umes) as Functional Electroanalytical Tools: Theory, Fabrication and Applications of UMES**
BOLAT G., SURUCU O., ABACI S.
in: ADVANCED ELECTROCHEMISTRY, SERDAR ABACI, Editor, PALME, Ankara, pp.1-26, 2018

Supported Projects

- BOLAT TOPÇU G., YAMAN Y. T., ABACI S., Project Supported by Higher Education Institutions, Nanokompozit Tabakası içeren DNA Biyosensörünün Hazırlanması ve DNA Antikanser İlacı Etkileşiminin İncelenmesi, 2020 - 2022
- AKBAL VURAL Ö., TAŞKIRAN Z. E., BOLAT G., TUĞÇE YAMAN Y., Project Supported by Higher Education Institutions, mikroRNA Teşhisi İçin Tek Kullanımlık, Etiketsiz Nanobiyosensörlerin Geliştirilmesi ve Uygulaması, 2018 - 2020
- ŞATIROĞLU N., BOLAT G., YAMAN Y. T., ARSEVEN YAŞACAN M., GÜÇOĞLU M., Project Supported by Higher Education Institutions, Sentetik Kannabinoid ve Katınonların Hızlı Ucuz ve Yüksek Performanslı Tayinine Yönelik Nanosensörlerin Hazırlanması, 2017 - 2020
- BOLAT TOPÇU G., ÇORBACIOĞLU F., YAMAN Y. T., MALEKGHADEMİ S., ABACI S., Project Supported by Higher Education Institutions, Potansiyel Altı Depozisyon Yöntemiyle UPD Ultramiktoelektrot Üretimi ve Elektrokatalitik Performansının Ortaya Çıkarılması, 2017 - 2019
- BOLAT TOPÇU G., Yaman Y. T., Project Supported by Higher Education Institutions, Kolon kanseri teşhisine yönelik impedimetrik sitosensörlerin geliştirilmesi, 2017 - 2018
- BOLAT TOPÇU G., BEKTAŞ F. S., Project Supported by Higher Education Institutions, Deniz Ürünlerinde Bulunan Arseniğin Elektrokimyasal ve Atomik Absorpsiyon ile Tayini, 2016 - 2017
- BOLAT TOPÇU G., ABACI S., Yaman Y. T., Sürücü Ö., Project Supported by Higher Education Institutions, Endokrin bozucu Ftalat ve Bisfenol A (BPA)'nın Elektrokimyasal Tayini İçin Yeni Platformların Oluşturulması, 2016 - 2017
- BOLAT TOPÇU G., Project Supported by Higher Education Institutions, 67. ULUSLARARASI ELEKTROKİMYA TOPLULUĞUNUN BULUŞMASI TOPLANTISINA KATILIM, 2016 - 2016

Metrics

Publication: 32
Citation (WoS): 298
Citation (Scopus): 290
H-Index (WoS): 10
H-Index (Scopus): 10

Non Academic Experience

