

Prof. GÖKHAN DEMİREL

Personal Information

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International Researcher IDs

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Education Information

Doctorate, Gazi University, Fen Bilimleri Enstitüsü, Kimya (Dr), Turkey 2003 - 2006

Postgraduate, Gazi University, Fen Bilimleri Enstitüsü, Kimya (YI) (Tezli), Turkey 2001 - 2003

Undergraduate, Gazi University, Fen Fakültesi, Kimya Bölümü, Turkey 1996 - 2002

Dissertations

Doctorate, Si(100) yüzeyler üzerinde kendiliğinden düzenlenen biyolojik aktiviteye sahip tabakaların tasarımı, Gazi University, Fen Bilimleri Enstitüsü, Kimya (Dr), 2006

Postgraduate, Tutuklanmış Aspergillus niger kullanılarak sitrik asit üretimi ve sitrik asit üretimi üzerine çeşitli etkilerin incelenmesi, Gazi University, Fen Bilimleri Enstitüsü, Kimya (YI) (Tezli), 2002

Research Areas

Biomaterials, Raman Spectroscopy, Sensors, Interface Chemistry, Spectroscopy, Surface Chemistry

Academic Titles / Tasks

Professor, Gazi University, Fen Fakültesi, Kimya, 2022 - Continues

Associate Professor, Gazi University, Fen Fakültesi, Kimya, 2012 - 2022

Assistant Professor, Gazi University, Fen Fakültesi, Kimya, 2010 - 2012

Expert, Pennsylvania State University University College Park Campus, Faculty Of Engineering, Material Science And Engineering, 2008 - 2010

Researcher, University College Cork, School of Chemistry, Chemistry, 2007 - 2008

Expert, Hacettepe University, Fen Bilimleri Enstitüsü, Biyomühendislik Anabilim Dalı (Disiplinlerarası), 2006 - 2007

Research Assistant, Gazi University, Fen Fakültesi, Kimya, 2002 - 2006

Academic and Administrative Experience

Head of Department, Gazi University, Fen Fakültesi, Kimya, 2023 - Continues

Supervised Theses

- DEMİREL G., Plasmorobotic: Plasmonic Engineering With Soft Robotic Systems, Postgraduate, G.LİMAN(Student), 2021
- DEMİREL G., Peptitlerin Kendiliğinden Düzenlenmesi İle Biyo-Esinlenilmiş Nanoyapıların Rasyonel Tasarımı, Postgraduate, A.Aliyeva(Student), 2019
- DEMİREL G., Peptitlerin kendiliğinden düzenlenmesi ile biyo-esinlenilmiş nanoyapıların rasyonel tasarımı, Postgraduate, A.ALIYEVA(Student), 2019
- DEMİREL G., Production Of Peptide Based 3-D Structure With Physical Vapor Deposition Method, Postgraduate, V.SAHİBBAYLI(Student), 2018
- DEMİREL G., Plasmonic Photocatalysis With The Aid Of Three Dimensional Anisotropic Nanostructures, Postgraduate, G.BAKIRCI(Student), 2018
- DEMİREL G., Anizotropik ve tek yönde yönelime sahip nanoyapılar içeren damlacık temelli mikroakışkan sistemlerde kargo taşınması, Postgraduate, B.ÖZDEMİR(Student), 2016
- DEMİREL G., Cargo Transportation In Droplet Based Microfluidics Systems Having Anisotropic And Undirectional Nanostructures, Postgraduate, B.Özdemir(Student), 2016
- DEMİREL G., Paper-Based Micro And Macro Fluidic Platforms For Point-Of-Care Testing, Postgraduate, E.BABÜR(Student), 2015
- DEMİREL G., Controlling self -assembly mechanism of dipeptides through Manipulation of bio-nano interface, Doctorate, H.Erdoğan(Student), 2015
- DEMİREL G., Dipeptitlerin kendiliğinden düzenlenme mekanizmalarının biyo-nano arayüzünün değişimi ile kontrolü, Doctorate, H.ERDOĞAN(Student), 2015

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Magnetically Actuated GelMA-Based Scaffolds as a Strategy to Generate Complex Bioprinted Tissues**
Ergene E., LİMAN G., YILGÖR HURİ P., DEMİREL G.
Advanced Materials Technologies, vol.9, no.17, 2024 (SCI-Expanded)
- II. **Solution-Processable Indenofluorenes on Polymer Brush Interlayer: Remarkable N-Channel Field-Effect Transistor Characteristics under Ambient Conditions**
Can A., DENEME İ., DEMİREL G., USTA H.
ACS Applied Materials and Interfaces, vol.15, no.35, pp.41666-41679, 2023 (SCI-Expanded)
- III. **Dynamic Tuning of Plasmonic Hot-Spot Generation through Cilia-Inspired Magnetic Actuators**
LİMAN G., Ergene E., Yildiz E., ÖZKAN HÜKÜM K., YILGÖR HURİ P., Cetin A. E., USTA H., DEMİREL G.
ADVANCED INTELLIGENT SYSTEMS, vol.5, 2023 (SCI-Expanded)
- IV. **Thermoresponsive Polymer Brush-Decorated 3-D Plasmonic Gold Nanorod Arrays as an Effective Plasmonic Sensing Platform**
Özkan Hüküm K., Caykara T., Demirel G.
ACS APPLIED POLYMER MATERIALS, vol.5, pp.4296-4304, 2023 (SCI-Expanded)
- V. **Green Fabrication of Anticorrosive, Antibacterial, and SERS Active Nanohybrid Coatings by Dual-Spinneret Electrospinning**
Deniz F., LİMAN G., DEMİREL G., DEMİREL G., SAN KESKİN N. O.
ACS Applied Polymer Materials, vol.5, 2023 (SCI-Expanded)
- VI. **Enabling three-dimensional porous architectures via carbonyl functionalization and molecular-specific organic-SERS platforms**
Deneme I., Liman G., Can A., Demirel G., Usta H.
NATURE COMMUNICATIONS, vol.12, pp.1-6, 2021 (SCI-Expanded)
- VII. **Hot-Spot Engineering Through Soft Actuators for Surface-Enhanced Raman Spectroscopy (SERS) Applications**
Liman G., Yildiz E., Ilhan H., Cetin A. E., Demirel G.
ADVANCED OPTICAL MATERIALS, vol.9, no.16, 2021 (SCI-Expanded)

- VIII. **Folding Control of Hydrogel Platforms through Pattern Design and Light Illumination**
Ergene E., LİMAN G., Yildiz E., Yilgor Huri P., DEMİREL G.
ACS Applied Polymer Materials, vol.3, no.7, pp.3272-3277, 2021 (SCI-Expanded)
- IX. **Injectable and Self-Healable pH-Responsive Gelatin-PEG/Laponite Hybrid Hydrogels as Long-Acting Implants for Local Cancer Treatment**
Cimen Z., Babadag S., ODABAŞ S., Altuntas S., DEMİREL G., Demirel G. B.
ACS APPLIED POLYMER MATERIALS, vol.3, no.7, pp.3504-3518, 2021 (SCI-Expanded)
- X. **The Role of Molecular Structure of Phenylalanine Peptides on the Formation of Vertically Aligned Ordered Bionanostructures: Implications for Sensing Application**
Sahibbeyli V., Yildiz D. B., Papir G., DEDE Y., DEMİREL G.
ACS APPLIED NANO MATERIALS, vol.3, no.5, pp.4305-4313, 2020 (SCI-Expanded)
- XI. **Silver thin film deposited 3-dimensional gold nanorod arrays for plasmonic catalysis**
YILMAZ M., Demirel G. B., DEMİREL G.
JOURNAL OF VACUUM SCIENCE & TECHNOLOGY A, vol.38, no.2, 2020 (SCI-Expanded)
- XII. **Molecular engineering of organic semiconductors enables noble metal-comparable SERS enhancement and sensitivity**
DEMİREL G., Giesecking R. L. M., ÖZDEMİR R., Kahmann S., Loi M. A., Schatz G. C., Facchetti A., USTA H.
NATURE COMMUNICATIONS, vol.10, 2019 (SCI-Expanded)
- XIII. **High Electron Mobility in [1]Benzothieno[3,2-b][1]benzothiophene-Based Field-Effect Transistors: Toward n-Type BTBTs**
USTA H., Kim D., ÖZDEMİR R., ZORLU Y., Kim S., Ruiz Delgado M. C., Harbuzaru A., Kim S., DEMİREL G., Hong J., et al.
CHEMISTRY OF MATERIALS, vol.31, no.14, pp.5254-5263, 2019 (SCI-Expanded)
- XIV. **Eco-Friendly Fabrication of Plasmonically Active Substrates Based on End-Grafted Poly(ethylene glycol) Layers**
Ocal S. K., PEKDEMİR S., Serhatioglu M., Ipekci H. H., Sahmetioglu E., NARİN İ., DUMAN F., ELBÜKEN Ç., DEMİREL G., ÖNSES M. S.
ACS SUSTAINABLE CHEMISTRY & ENGINEERING, vol.7, no.4, pp.4315-4324, 2019 (SCI-Expanded)
- XV. **Asymmetric, nano-textured surfaces influence neuron viability and polarity**
Belu A., YILMAZ M., Neumann E., Offenhausser A., DEMİREL G., Mayer D.
JOURNAL OF BIOMEDICAL MATERIALS RESEARCH PART A, vol.106, no.6, pp.1634-1645, 2018 (SCI-Expanded)
- XVI. **Surface-enhanced Raman spectroscopy (SERS): an adventure from plasmonic metals to organic semiconductors as SERS platforms**
DEMİREL G., USTA H., YILMAZ M., Celik M., Alidagi H. A., BÜYÜKSERİN F.
JOURNAL OF MATERIALS CHEMISTRY C, vol.6, no.20, pp.5314-5335, 2018 (SCI-Expanded)
- XVII. **Fabrication of Plasmonically Active Substrates Using Engineered Silver Nanostructures for SERS Applications**
ŞAKİR M., PEKDEMİR S., KARATAY A., Kucukoz B., Ipekci H. H., ELMALI A., DEMİREL G., ÖNSES M. S.
ACS APPLIED MATERIALS & INTERFACES, vol.9, no.45, pp.39795-39803, 2017 (SCI-Expanded)
- XVIII. **Nanostructured organic semiconductor films for molecular detection with surface-enhanced Raman spectroscopy**
YILMAZ M., Babur E., Ozdemir M., Giesecking R. L., DEDE Y., TAMER U., Schatz G. C., Facchetti A., USTA H., DEMİREL G.
NATURE MATERIALS, vol.16, no.9, pp.918-925, 2017 (SCI-Expanded)
- XIX. **Measuring Temperature Change at the Nanometer Scale on Gold Nanoparticles by Using Thermoresponsive PEGMA Polymers**
Yavuz M. S., Citir M., ÇAVUŞOĞLU H., DEMİREL G.
CHEMNANOMAT, vol.3, no.7, pp.496-502, 2017 (SCI-Expanded)
- XX. **Three-Dimensional Au-Coated Electrospayed Nanostructured BODIPY Films on Aluminum Foil as Surface-Enhanced Raman Scattering Platforms and Their Catalytic Applications**
YILMAZ M., ERKARTAL M., Ozdemir M., Sen U., USTA H., DEMİREL G.
ACS APPLIED MATERIALS & INTERFACES, vol.9, no.21, pp.18199-18206, 2017 (SCI-Expanded)
- XXI. **Understanding the effect of polydopamine coating on catalytic reduction reactions**

- Bakirci G., YILMAZ M., Babur E., Ozden D., DEMİREL G.
CATALYSIS COMMUNICATIONS, vol.91, pp.48-52, 2017 (SCI-Expanded)
- XXII. **Fabrication of Plasmonic Nanorod-Embedded Dipeptide Microspheres via the Freeze-Quenching Method for Near-Infrared Laser-Triggered Drug-Delivery Applications**
Erdogan H., YILMAZ M., Babur E., DUMAN M., Aydin H. M., DEMİREL G.
BIOMACROMOLECULES, vol.17, no.5, pp.1788-1794, 2016 (SCI-Expanded)
- XXIII. **Design and development of functional organic small molecules and polymers for optoelectronics**
USTA H., DEMİREL G., Facchetti A., Muccini M.
ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY, vol.251, 2016 (SCI-Expanded)
- XXIV. **The fabrication of plasmonic nanoparticle-containing multilayer films via a bio-inspired polydopamine coating**
Yilmaz M., Bakirci G., Erdogan H., Tamer U., DEMİREL G.
RSC ADVANCES, vol.6, no.15, pp.12638-12641, 2016 (SCI-Expanded)
- XXV. **Micro-/Nanostructured Highly Crystalline Organic Semiconductor Films for Surface-Enhanced Raman Spectroscopy Applications**
YILMAZ M., Ozdemir M., Erdogan H., TAMER U., Sen U., Facchetti A., USTA H., DEMİREL G.
ADVANCED FUNCTIONAL MATERIALS, vol.25, no.35, pp.5669-5676, 2015 (SCI-Expanded)
- XXVI. **Nanostructured functional thin films through vapor phase deposition: A BIMREL's approach to bioinspiration**
DEMİREL G.
ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY, vol.250, 2015 (SCI-Expanded)
- XXVII. **New method for measuring the temperature change of photothermal Au nanostructures using smart polymers**
ÇAVUŞOĞLU H., Sakalak H., Buyukbekar B. Z., DEMİREL G., Citir M., YAVUZ M. S.
ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY, vol.250, 2015 (SCI-Expanded)
- XXVIII. **Light-Driven Unidirectional Liquid Motion on Anisotropic Gold Nanorod Arrays**
YILMAZ M., Kuloglu H. B., Erdogan H., Cetin S. Ş., YAVUZ M. S., İNCE G., DEMİREL G.
ADVANCED MATERIALS INTERFACES, vol.2, no.12, 2015 (SCI-Expanded)
- XXIX. **Measuring temperature change on photothermal Au nanorod and nanocage upon laser irradiation**
ÇAVUŞOĞLU H., Sakalak H., Buyukbekar B. Z., DEMİREL G., Citir M., YAVUZ M. S.
ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY, vol.250, 2015 (SCI-Expanded)
- XXX. **Morphological Versatility in the Self-Assembly of Val-Ala and Ala-Val Dipeptides**
Erdogan H., Babur E., YILMAZ M., Candas E., GÖRDESEL YILDIZ M., DEDE Y., ÖREN E. E., Demirel G. B., Ozturk M. K., YAVUZ M. S., et al.
LANGMUIR, vol.31, no.26, pp.7337-7345, 2015 (SCI-Expanded)
- XXXI. **Nanothermometer: Measuring temperature change in nanometer scale on photothermal Au nanoparticles**
Sakalak H., Cavusoglu H., Buyukbekar B. Z., DEMİREL G., Citir M., Yavuz M. S.
ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY, vol.249, 2015 (SCI-Expanded)
- XXXII. **Determining temperature change on photothermal Au nanorod and Au nanocage using smart polymers**
Buyukbekar B. Z., Cavusoglu H., Sakalak H., Citir M., DEMİREL G., Yavuz M. S.
ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY, vol.249, 2015 (SCI-Expanded)
- XXXIII. **Large area uniform deposition of silver nanoparticles through bio-inspired polydopamine coating on silicon nanowire arrays for practical SERS applications**
Akin M. S., YILMAZ M., Babur E., Ozdemir B., Erdogan H., TAMER U., DEMİREL G.
JOURNAL OF MATERIALS CHEMISTRY B, vol.2, no.30, pp.4894-4900, 2014 (SCI-Expanded)
- XXXIV. **Vapor-phase deposition of polymers as a simple and versatile technique to generate paper-based microfluidic platforms for bioassay applications**
DEMİREL G., Babur E.
ANALYST, vol.139, no.10, pp.2326-2331, 2014 (SCI-Expanded)

- XXXV. **Combining 3-D plasmonic gold nanorod arrays with colloidal nanoparticles as a versatile concept for reliable, sensitive, and selective molecular detection by SERS**
YILMAZ M., Senlik E., Biskin E., YAVUZ M. S., TAMER U., DEMİREL G.
PHYSICAL CHEMISTRY CHEMICAL PHYSICS, vol.16, no.12, pp.5563-5570, 2014 (SCI-Expanded)
- XXXVI. **Plasmon-Enhanced Photocatalysis on Anisotropic Gold Nanorod Arrays**
Kubus L., Erdogan H., Cetin S. Ş., Biskin E., DEMİREL G.
CHEMCATCHEM, vol.5, no.10, pp.2973-2977, 2013 (SCI-Expanded)
- XXXVII. **Bioinspired surface modification of poly(2-hydroxyethyl methacrylate) based microbeads via oxidative polymerization of dopamine**
Yilmaz F., Kose K., Sari M. M., DEMİREL G., UZUN L., DENİZLİ A.
COLLOIDS AND SURFACES B-BIOINTERFACES, vol.109, pp.176-182, 2013 (SCI-Expanded)
- XXXVIII. **One-Dimensional Surface-Imprinted Polymeric Nanotubes for Specific Biorecognition by Initiated Chemical Vapor Deposition (iCVD)**
İNCE G., Armagan E., Erdogan H., BÜYÜKSERİN F., UZUN L., DEMİREL G.
ACS APPLIED MATERIALS & INTERFACES, vol.5, no.14, pp.6447-6452, 2013 (SCI-Expanded)
- XXXIX. **Laser-Triggered Degelation Control of Gold Nanoparticle Embedded Peptide Organogels**
Erdogan H., Sakalak H., Yavuz M. S., DEMİREL G.
LANGMUIR, vol.29, no.23, pp.6975-6982, 2013 (SCI-Expanded)
- XL. **Small molecule analysis using laser desorption/ionization mass spectrometry on nano-coated silicon with self-assembled monolayers**
ÇELİKBIÇAK Ö., DEMİREL G., Piskin E., SALİH B.
ANALYTICA CHIMICA ACTA, vol.729, pp.54-61, 2012 (SCI-Expanded)
- XLI. **Isotropic and anisotropic dipeptide films based on gas phase deposition**
DEMİREL G., TAMER U.
NANOTECHNOLOGY, vol.23, no.22, 2012 (SCI-Expanded)
- XLII. **Nanoporous Polymeric Nanofibers Based on Selectively Etched PS-b-PDMS Block Copolymers**
Demirel G. B., BÜYÜKSERİN F., Morris M. A., DEMİREL G.
ACS APPLIED MATERIALS & INTERFACES, vol.4, no.1, pp.280-285, 2012 (SCI-Expanded)
- XLIII. **Controlling uni-directional wetting via surface chemistry and morphology**
Kubus L., Erdogan H., Piskin E., DEMİREL G.
SOFT MATTER, vol.8, no.46, pp.11704-11707, 2012 (SCI-Expanded)
- XLIV. **Core-shell magnetic nanoparticles: a comparative study based on silica and polydopamine coating for magnetic bio-separation platforms**
Sahin F., Turan E., TÜMTÜRK H., DEMİREL G.
ANALYST, vol.137, no.23, pp.5654-5658, 2012 (SCI-Expanded)
- XLV. **Green catalysts based on bio-inspired polymer coatings and electroless plating of silver nanoparticles**
Celen B., Ekiz D., Piskin E., DEMİREL G.
JOURNAL OF MOLECULAR CATALYSIS A-CHEMICAL, vol.350, pp.97-102, 2011 (SCI-Expanded)
- XLVI. **Surface-Induced Self-Assembly of Dipeptides onto Nanotextured Surfaces**
DEMİREL G., BÜYÜKSERİN F.
LANGMUIR, vol.27, no.20, pp.12533-12538, 2011 (SCI-Expanded)
- XLVII. **Micro-array versus nano-array platforms: a comparative study for ODN detection based on SPR enhanced ellipsometry**
Celen B., DEMİREL G., Piskin E.
NANOTECHNOLOGY, vol.22, no.16, 2011 (SCI-Expanded)
- XLVIII. **Molecularly imprinted hydrogels for fibrinogen recognition**
Cimen D., Akbulut E., DEMİREL G., ÇAYKARA T.
REACTIVE & FUNCTIONAL POLYMERS, vol.69, no.9, pp.655-659, 2009 (SCI-Expanded)
- XLIX. **Functional polymeric supports for immobilization of cholesterol oxidase**
Akkaya B., Sahin F., DEMİREL G., TÜMTÜRK H.

BIOCHEMICAL ENGINEERING JOURNAL, vol.43, no.3, pp.333-337, 2009 (SCI-Expanded)

- L. **Hemoglobin recognition of molecularly imprinted hydrogels prepared at different pHs**
Uysal A., DEMİREL G., Turan E., ÇAYKARA T.
ANALYTICA CHIMICA ACTA, vol.625, no.1, pp.110-115, 2008 (SCI-Expanded)
- LI. **Immobilization of glucose isomerase in surface-modified alginate gel beads**
TÜMTÜRK H., DEMİREL G., ALTINOK H., Aksoy S., HASIRCI N.
JOURNAL OF FOOD BIOCHEMISTRY, vol.32, no.2, pp.234-246, 2008 (SCI-Expanded)
- LII. **Construction of a novel multilayer system and its use for oriented immobilization of immunoglobulin G**
DEMİREL G., Caykara T., Akaoglu B., ÇAKMAK M.
SURFACE SCIENCE, vol.601, no.19, pp.4563-4570, 2007 (SCI-Expanded)
- LIII. **Chemisorption of 3-aminopropyltrimethoxysilane on Si(001)-(2 x 2)**
DEMİREL G., ÇAKMAK M., Caykara T., Ellialtioglu S.
JOURNAL OF PHYSICAL CHEMISTRY C, vol.111, no.41, pp.15020-15025, 2007 (SCI-Expanded)
- LIV. **A new method for immobilization of acetylcholinesterase**
Tumturk H., Sahin F., DEMİREL G.
BIOPROCESS AND BIOSYSTEMS ENGINEERING, vol.30, no.2, pp.141-145, 2007 (SCI-Expanded)
- LV. **Binding formation of 12-hydroxydodecanoic acid on Si(001)-(2 x 2)**
Demirel G., Çakmak M., Caykara T.
JOURNAL OF PHYSICAL CHEMISTRY C, vol.111, pp.4375-4378, 2007 (SCI-Expanded)
- LVI. **Adsorption of bovine serum albumine onto poly (N-t-butylacrylamide-co-acrylamide/maleic acid) hydrogels**
DEMİREL G.
JOURNAL OF POLYMER RESEARCH, vol.14, no.1, pp.23-30, 2007 (SCI-Expanded)
- LVII. **Temperature-responsive characteristics of poly (N-isopropylacrylamide) hydrogels with macroporous structure**
Caykara T., Kiper S., DEMİREL G., Demirci S., Cakanyildirim C.
POLYMER INTERNATIONAL, vol.56, no.2, pp.275-282, 2007 (SCI-Expanded)
- LVIII. **Preparation and application of poly(N,N-dimethylacrylamide-co-acrylamide) and poly(N-isopropylacrylamide-co-acrylamide)/kappa-Carrageenan hydrogels for immobilization of lipase**
Tumturk H., Karaca N., DEMİREL G., Sahin F.
INTERNATIONAL JOURNAL OF BIOLOGICAL MACROMOLECULES, vol.40, no.3, pp.281-285, 2007 (SCI-Expanded)
- LIX. **pH-Dependent swelling behavior and network parameters of ionic poly(N-t-butylacrylamide-co-acrylamide) hydrogels**
Turan E., DEMİREL G., Zengin M., Simsek D., Caykara T.
JOURNAL OF APPLIED POLYMER SCIENCE, vol.102, no.2, pp.1624-1630, 2006 (SCI-Expanded)
- LX. **Immobilization of urease by using chitosan-alginate and poly(acrylamide-co-acrylic acid)/kappa-carrageenan supports**
Kara F., DEMİREL G., Tumturk H.
BIOPROCESS AND BIOSYSTEMS ENGINEERING, vol.29, no.3, pp.207-211, 2006 (SCI-Expanded)
- LXI. **Network parameters and volume phase transition behavior of poly(N-isopropylacrylamide) hydrogels**
Caykara T., Kiper S., DEMİREL G.
JOURNAL OF APPLIED POLYMER SCIENCE, vol.101, no.3, pp.1756-1762, 2006 (SCI-Expanded)
- LXII. **Semi-interpenetrating polymer networks (IPNs) for entrapment of glucose isomerase**
DEMİREL G., Ozcetin G., Sahin F., Tumturk H., Aksoy S., HASIRCI N.
REACTIVE & FUNCTIONAL POLYMERS, vol.66, no.4, pp.389-394, 2006 (SCI-Expanded)
- LXIII. **Thermosensitive poly(N-isopropylacrylamide-co-acrylamide) hydrogels: Synthesis, swelling and interaction with ionic surfactants**
Caykara T., Kiper S., DEMİREL G.
EUROPEAN POLYMER JOURNAL, vol.42, no.2, pp.348-355, 2006 (SCI-Expanded)

- LXIV. **A novel matrix for the immobilization of acetylcholinesterase**
Sahin F., DEMİREL G., TUMTURK H.
INTERNATIONAL JOURNAL OF BIOLOGICAL MACROMOLECULES, vol.37, no.3, pp.148-153, 2005 (SCI-Expanded)
- LXV. **Influence of alcohols on citric acid production by Aspergillus niger A-9 entrapped in polyacrylamide gels**
Yaykasli K., DEMİREL G., YASAR A.
JOURNAL OF FOOD ENGINEERING, vol.70, no.4, pp.518-522, 2005 (SCI-Expanded)
- LXVI. **pH/temperature-sensitive imprinted ionic poly (N-tert-butylacrylamide-co-acrylamide/maleic acid) hydrogels for bovine serum albumin**
DEMİREL G., OZCETIN G., TURAN E., CAYKARA T.
MACROMOLECULAR BIOSCIENCE, vol.5, no.10, pp.1032-1037, 2005 (SCI-Expanded)
- LXVII. **Binary immobilization of tyrosinase by using alginate gel beads and poly(acrylamide-co-acrylic acid) hydrogels**
Yahsi A., Sahin F., DEMİREL G., TUMTURK H.
INTERNATIONAL JOURNAL OF BIOLOGICAL MACROMOLECULES, vol.36, no.4, pp.253-258, 2005 (SCI-Expanded)
- LXVIII. **The production of citric acid by using immobilized Aspergillus niger A-9 and investigation of its various effects**
DEMİREL G., YAYKASLI K., YASAR A.
FOOD CHEMISTRY, vol.89, no.3, pp.393-396, 2005 (SCI-Expanded)

Articles Published in Other Journals

- I. **Anisotropic Gold Nanorod Arrays for Plasmon-Enhanced Electrochemical Sensing**
UÇAR A., ER E., DEMİREL G.
ACS Applied Optical Materials, vol.2, no.12, pp.2551-2558, 2024 (Scopus)
- II. **Light- and Solvent-Responsive Bilayer Hydrogel Actuators with Reversible Bending Behaviors**
Liman G., Mutlutürk E., Demirel G.
ACS Materials Au, vol.4, no.3, pp.1-8, 2024 (Peer-Reviewed Journal)
- III. **CuO/TiO₂ Metal Oxide Nanocomposite Synthesis via Room Temperature Ionic Liquid**
EŞMEKAYA M. A., ŞENTÜRK F., KAYHAN H., TÜYSÜZ M. Z., TOMRUK A., ARAL B., DEMİREL G., AKIN SÖNMEZ N., ÖZTÜRK M., ÖZÇELİK S., et al.
Journal of Nanomaterials Molecular Nanotechnology, vol.5, no.1, 2016 (Peer-Reviewed Journal)

Books

- I. **Biyoesinlenmiş Fonksiyonel Malzemeler**
erdoğan H., YILMAZ M., Özden D., DEMİREL G.
in: İleri Malzemeler: Biyomalzeme ve Nanomalzeme Uygulamaları, Filiz Kuralay, Editor, Hacettepe Üniversitesi, Ankara, pp.89-115, 2018

Papers Published in Refereed Scientific Meetings

- I. **RAFT Polimerleşme Tekniği ile Sentezlenen Florinli Kopolimerlerin Su ve Yağ İtici Özelliklerinin Araştırılması**
ÖZKAN HÜKÜM K., DEMİR ÇALIŞKAN T., CAYKARA T., DEMİREL G.
IX. POLYMER SCIENCE AND TECHNOLOGY CONGRESS WITH INTERNATIONAL PARTICIPATION, Ankara, Turkey, 16 - 18 September 2024
- II. **DEVELOPMENT OF 4D PRINTING STRATEGY FOR SKELETAL MUSCLE TISSUE ENGINEERING**

Ergene E., Liman G., Demirel G., Yilgör Huri P.

The European Orthopaedic Research Society (EORS) 31st Annual Meeting, Porto, Portugal, 27 - 29 September 2023, pp.106

- III. **Fabrication and SERS application of the Thermoresponsive Polymer Brush-Decorated 3-D Plasmonic Gold Nanorod Arrays for Single-Molecule Detection**
ÖZKAN HÜKÜM K., ÇAYKARA T., DEMİREL G.
17th NANOSCIENCE & NANOTECHNOLOGY CONFERENCE, İzmir, Turkey, 27 - 29 August 2023, pp.97
- IV. **Dynamic Plasmonic Hotspot Engineering with Cilia-Inspired Magnetic Soft Actuators**
Liman G., Ergene E., Yıldız E., Özkan Hüküm K., Çetin A. E., Usta H., Demirel G., Yilgör Huri P.
17th NANOSCIENCE & NANOTECHNOLOGY CONFERENCE, İzmir, Turkey, 27 - 29 August 2023
- V. **Polystyrene Based Actuator for Hot-spot Generation in SERS**
YILDIZ E., DEREBAŞI M., LİMAN G., ÖZKAN HÜKÜM K., DEMİREL G.
17th NANOSCIENCE & NANOTECHNOLOGY CONFERENCE, 27 August 2023
- VI. **Light-Triggered Hydrogels for Folding Control with Pattern Design**
Ergene E., Liman G., Yıldız E., Demirel G., Huri P.
16th NANOSCIENCE & NANOTECHNOLOGY CONFERENCE, Ankara, Turkey, 5 - 08 September 2022, vol.1, no.1, pp.52
- VII. **Tunable Plasmonic Hot-Spot Generation for Surface-Enhanced Raman Spectroscopy through Cilia Inspired Magnetic Actuators**
Liman G., Yıldız E., Ergene E., Demirel G.
16th NANOSCIENCE & NANOTECHNOLOGY CONFERENCE, Ankara, Turkey, 5 - 08 September 2022, vol.1, no.1, pp.350
- VIII. **Hot-Spot Engineering Through Soft Actuators**
Derebaşı M., Liman G., Demirel G.
16th NANOSCIENCE & NANOTECHNOLOGY CONFERENCE, Ankara, Turkey, 5 - 08 September 2022, vol.1, no.1, pp.347
- IX. **Temperature-Responsive P(MEO2-MA) Polymer Brushes for SERS Applications**
ÖZKAN HÜKÜM K., DEMİREL G., ÇAYKARA T.
16th NANOSCIENCE & NANOTECHNOLOGY CONFERENCE, Ankara, Turkey, 5 - 08 September 2022, pp.309
- X. **Yumuşak Robotik Platformlar ve Yüzey Güçlendirilmiş Raman Spektroskopisi (SERS): Robotik-SERS**
Liman G., Ergene E., Demirel G.
VIII. POLİMER BİLİM ve TEKNOLOJİ KONGRESİ, Malatya, Turkey, 20 - 23 June 2022, vol.1, no.1, pp.161
- XI. **Yumuşak Aktüatörler Araçlığıyla Sıcak Nokta Mühendisliği**
Derebaşı M., Dinçer B., Liman G., Demirel G.
VIII. POLİMER BİLİM ve TEKNOLOJİ KONGRESİ, Malatya, Turkey, 20 - 23 June 2022, vol.1, no.1, pp.160
- XII. **Demonstration of a Novel Cladding Light Stripper Fabrication Method Based On Poly (Chloro-P-Xylene) Polymer Material**
Midilli Y., Liman G., Demirel G., Ortaç B.
2021 Conference on Lasers and Electro-Optics Europe & European Quantum Electronics Conference (CLEO/Europe-EQEC), Munich, Germany, 21 - 25 July 2021, pp.21
- XIII. **Yumuşak Robotik Sistemler Yardımı ile Yüzey-Güçlendirilmiş Raman Spektroskopisi (SERS) Uygulamaları**
Liman G., Demirel G.
32. Ulusal Kimya Kongresi, Eskişehir, Turkey, 17 September 2020, pp.287
- XIV. **Nanostructured Functional Thin Films and Their SERS Applications**
DEMİREL G.
NANOTR-15, 3 - 06 November 2019
- XV. **Surface-enhanced Raman spectroscopy (SERS): An adventure from plasmonic metals to organic semiconductors as SERS platforms**
DEMİREL G.
2. EBAT Congress, 26 - 29 October 2019

- XVI. **Use of Surface Enhanced Raman Spectroscopy as a Tool for Detection of 6-Mono Acetyl Morphine (6-MAM)**
AKÇAN R., YILDIRIM M. Ş., İLHAN H., DEMİREL G., TAMER U., SAĞLAM N.
8th Rostocker Int. Conf.: Thermophysical Properties for Technical Thermodynamics, Çeşme, İzmir, Turkey, 22 - 24 September 2019
- XVII. **Use of Surface Enhanced Raman Spectroscopy as a Tool for Detection of 6-Mono Acetyl Morphine (6-MAM)**
Akcan R., Yıldırım M., İlhan H., DEMİREL G., Tamer U., Sağlam N.
6th International Conference: Thermophysical and mechanical Properties of Advanced Materials, 22 - 24 September 2019
- XVIII. **Measurements of 6-monoacetylmorphine in body fluids using surface enhanced raman spectroscopy**
AKÇAN R., YILDIRIM M. Ş., İLHAN H., DEMİREL G., TAMER U., SAĞLAM N.
20th euroanalysis, 1 May - 05 September 2019
- XIX. **Organic semiconductor based surface-enhanced Raman spectroscopy platforms**
DEMİREL G., USTA H., Facchetti A.
256th National Meeting and Exposition of the American-Chemical-Society (ACS) - Nanoscience, Nanotechnology and Beyond, Massachusetts, United States Of America, 19 - 23 August 2018, vol.256
- XX. **On-site formation of Ag nanostructures and their SERS activity**
Sakır M., DEMİREL G., Önses M. S.
13th Nanoscience and Nanotechnology Conference, 22 - 25 October 2017
- XXI. **Nanostructured Functional Thin Films through Vapor Phase Deposition**
DEMİREL G.
International Congress on Chemistry and Material Science, 5 - 07 October 2017
- XXII. **Plazmonik Isıtma Yaklaşımı ile Peptit Moleküllerinin Kontrollü Kristalizasyonu**
Aliyeva A., DEMİREL G.
Fiziksel Kimya Kongresi, Turkey, 15 - 18 May 2017
- XXIII. **Nanostructured superhydrophobic organic semiconductor films enable sub-zeptomole level molecular sensing in surface-enhanced Raman spectroscopy**
DEMİREL G., USTA H., Facchetti A.
253rd National Meeting of the American-Chemical-Society (ACS) on Advanced Materials, Technologies, Systems, and Processes, San-Francisco, Costa Rica, 2 - 06 April 2017, vol.253
- XXIV. **BIMREL yaklaşımı ile fonksiyonel 3 boyutlu malzeme üretimi**
DEMİREL G.
3. Biyomalzeme Günü, Turkey, 17 - 18 November 2016
- XXV. **Gold modified anisotropic titanium nanorod arrays for sensing applications**
Özden D., YILMAZ M., Pişkin E., DEMİREL G.
3rd International Congress on Biosensors, 5 - 07 October 2016
- XXVI. **Polydopamine coated S1NWs target surfaces for the detection of small molecules in laser desorption ionization mass spectrometry**
Şanlı G., DEMİREL G., ÇELİKBIÇAK Ö.
3rd International Congress on Biosensors, 5 - 07 October 2016
- XXVII. **Self powering biosensors for biofuel cell applications**
Dündar N., YILMAZ M., DEMİREL G., KURALAY F.
3rd International Congress on Biosensors, 5 - 07 October 2016
- XXVIII. **Thin Films of p type Organic Semiconductors as SERS substrates**
YILMAZ M., Özden D., USTA H., DEMİREL G.
3rd International Congress on Biosensors, 5 - 07 October 2016
- XXIX. **Vapor phase deposition of polymers as a simple and versatile technique to generate paper based microfluidic platforms for bioassay applications**
babür e., DEMİREL G.
3rd International Congress on Biosensors, 5 - 07 October 2016

- XXX. **Layer by layer films of polydopamine and gold nanoparticles**
Dündar G. B., YILMAZ M., DEMİREL G.
3rd International Congress on Biosensors, 5 - 07 October 2016
- XXXI. **Neuron parylene interaction from planar to asymmetric nanotextured surface investigation of cell development**
Belu A., DEMİREL G., Neumann E., Mayer D., Offenhaeusser A.
E-MRS 2016 spring meeting, 2 - 06 May 2016
- XXXII. **Design and development of functional organic small molecules and polymers for optoelectronics**
USTA H., DEMİREL G., Facchetti A., Muccini M.
ACS 2016 spring meeting, 13 - 17 March 2016
- XXXIII. **Nanostructured functional thin films through vapor phase deposition A BIMREL s approach to bioinspiration**
DEMİREL G.
ACS 250th National Meeting, BOSTON, United States Of America, 16 - 20 August 2015
- XXXIV. **Bioinspired Thin Films Through Vapor Phase Depositon**
DEMİREL G.
E-MRS 2015 Spring Meeting, Lille, France, 11 - 15 May 2015
- XXXV. **Influences of size, shape and surface chemistry of gold nanoparticles on dipeptide self-assembly**
Erdogan H., Sakalak H., YAVUZ M. S., DEMİREL G.
247th National Spring Meeting of the American-Chemical-Society (ACS), Texas, United States Of America, 16 - 20 March 2014, vol.247
- XXXVI. **Etkin maddeleri gliklazit olan ilaçların sağlıklı insanlarda ve şeker hastalarında kan şeker seviyesi üzerine etkilerinin incelenmesi**
ÇETE S., DEMİREL G., ÖREN S., YAŞAR A.
Selçuk Üniversitesi XVI. Ulusal Kimya Kongresi, 10 September 2002

Supported Projects

- Demirel G., YİLDİRİM E., TUBITAK Project, Sağlıklı Yaşam İçin Yeni Nesil Biyomalzeme Teknolojileri Araştırma Ağı, 2023 - 2027
- Demirel G., ASAR T., TUBITAK Project, Plazmorobotik: Yumuşak Robotik Platformlar Yardımı Ile Sıcak Nokta Mühendisliği Ve Yüze-Güçlendirilmiş Raman Spektroskopisi (SERS) Uygulamaları, 2022 - 2024
- DEMİREL G., DEMİR ÇALIŞKAN T., ÖZKAN HÜKÜM K., Project Supported by Higher Education Institutions, TERSİNİR KATILMA-AYRILMA ZİNCİR TRANSFER RAFT POLİMERİZASYONU İLE KENDİ KENDİNİ TEMİZLEYEN AKILLI KAPLAMALARIN SENTEZLENMESİ, 2021 - 2023
- Demirel G., TUBITAK Project, Molecular and Morphological Engineering of Organic Semiconductors for Surface-Enhanced Raman Spectroscopy Applications , 2020 - 2022
- Dede Y., Demirel G., Usta H., TUBITAK Project, Organik Yarı İletken Temelli 3-Boyutlu Mikro-/Nano-Yapılı Platformların Yüze-Güçlendirilmiş Raman Spektroskopisinde (Sers) Kullanımları, 2018 - 2020
- DEMİREL G., Project Supported by Higher Education Institutions, Biyo esinlenilmiş Malzeme Araştırma Laboratuvarı BIMREL Araştırma Altyapısının Güçlendirilmesi, 2016 - 2017
- DEMİREL G., Project Supported by Higher Education Institutions, Biyo-esinlenilmiş Malzeme Araştırma Laboratuvarı (BIMREL) Araştırma Altyapısının Güçlendirilmesi, 2015 - 2017
- DEMİREL G., TUBITAK Project, 3 Boyutlu Anizotropik Nanoyapılar Yardımı Ile Plazmonik Fotokataliz, 2014 - 2017
- DEMİREL G., TUBITAK Project, Anizotropik Ve Tekyönde Yönelime Sahip Nanoyapılar İçeren Damlacık Temelli Mikroakışkan Sistemlerde Kargo Taşınması, 2012 - 2015
- DEMİREL G., Project Supported by Higher Education Institutions, PS-b-PDMS BLOK KOPOLİMERLER KULLANILARAK NANOĞÖZENEKLI POLİMERİK NANOFİBERLERİN HAZIRLANMASI, 2012 - 2012
- DEMİREL G., Project Supported by Higher Education Institutions, TEK YÖNDE YÖNELİME SAHİP ANİZOTROPİK NANOFİLMLEİN TASARIMI, 2012 - 2012

DEMİREL G., Project Supported by Higher Education Institutions, Peptitlerin kendiliğinden düzenlenmesi ile yeni nanoyapıların tasarımı, 2010 - 2011

DEMİREL G., Project Supported by Higher Education Institutions, BLOK KOPOLİMERLER İLE NANO-DESENLENMİŞ YÜZEYLERİN TASARIMI, 2010 - 2011

Patent

DEMİREL G., Buhar Fazı Polimerizasyon Tekniği ile Hazırlanmış Kağıt Temelli bir Analiz Aracı, Patent, CHAPTER C Chemistry; Metallurgy, 2017

DEMİREL G., EĞİK AÇI BİRİKTİRME TEKNİĞİ İLE PLASMON GÜÇLENDİRİLMİŞ YÖNELİMSEL BİR KATALİTİK YÜZEY OLUŞTURMA YÖNTEMİ, Patent, CHAPTER C Chemistry; Metallurgy, 2015

Metrics

Publication: 109

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H-Index (Scopus): 35

Awards

Demirel G., Bilim Madalyası, İzmir Biyotıp Ve Genom Merkezi, November 2021

Demirel G., Yılın Genç Bilim İnsanı, Bilim Kahramanları Derneği, May 2017

Demirel G., Genç Bilim İnsanı Ödülü, Türkiye Bilimler Akademisi, June 2014

Demirel G., BAGEP, Bilim Akademisi Derneği, May 2014

Demirel G., Eser Tümen Üstün Başarı Ödülü, Fevzi Akkaya Bilimsel Çalışmaları Destekleme Fonu (Fabled), May 2013

Demirel G., Araştırma Teşvik Ödülü, Mustafa Parlar Vakfı, December 2012

Non Academic Experience

The Pennsylvania State University, Post-Doctoral Researcher

University College Cork, Visiting Researcher

Hacettepe Üniversitesi, Doktora Sonrası Araştırmacı