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Personal Information

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International Researcher IDs

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Education Information

Doctorate, Imperial College of Science, Technology and Medicine, United Kingdom 2009 - 2014

Postgraduate, Imperial College of Science, Technology and Medicine, United Kingdom 2008 - 2009

Undergraduate, Ondokuz Mayıs University, Faculty Of Arts And Sciences, Department Of Chemistry, Turkey 2000 - 2004

Foreign Languages

English, B1 Intermediate

Dissertations

Doctorate, Development of a nanopore-based biosensor embedded into a microfluidic channel, Imperial College Of Science, Technology And Medicine, 2014

Postgraduate, Nanoparticles for the delivery of therapeutic nucleic acids, Imperial College Of Science, Technology And Medicine, 2009

Research Areas

Health Sciences, Biomedical Engineering, Natural Sciences, Engineering and Technology

Academic Titles / Tasks

Research Assistant, Eskisehir Osmangazi University, Fen Bilimleri Enstitüsü, 2016 - 2016

Research Assistant, Eskisehir Osmangazi University, Fen-Edebiyat Fakültesi, Kimya Bölümü, 2015 - 2016

Research Assistant, Jacobs University Bremen, Biophysics, 2014 - 2015

Courses

Nanofabrication Techniques, Postgraduate, 2017 - 2018, 2016 - 2017

Nanotechnology and Nanomaterials, Undergraduate, 2017 - 2018

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **An electrochemical biosensor with integrated microheater to improve the sensitivity of electrochemical nucleic acid biosensors**
Akcakoca I., Ghorbanpoor H., Blair E., Ozturk Y., Dizaji A. N., Kocagoz T., Avci H., Corrigan D., Guzel F. D.
JOURNAL OF MICROMECHANICS AND MICROENGINEERING, vol.32, no.4, pp.1-20, 2022 (SCI-Expanded)
- II. **Electrochemical-based “antibiotsensor” for the whole-cell detection of the vancomycin-susceptible bacteria**
Norouz Dizaji A., Ali Z., Ghorbanpoor H., Ozturk Y., AKÇAKOCA İ., AVCI H., DOĞAN GÜZEL F.
Talanta, vol.234, 2021 (SCI-Expanded)
- III. **Towards understanding single-channel characteristics of OccK8 purified from Pseudomonas aeruginosa**
DOĞAN GÜZEL F., Pletzer D., Norouz Dizaji A., Al-Nahas K., Bajrai M., Winterhalter M.
European Biophysics Journal, vol.50, no.1, pp.87-98, 2021 (SCI-Expanded)
- IV. **Decellularized inner body membranes for tissue engineering: A review.**
Inci I., Norouz D., Ozel C., Morali U., Dogan G., Avci H.
Journal of biomaterials science. Polymer edition, vol.31, pp.1287-1368, 2020 (SCI-Expanded)
- V. **Controlled gradual and local thinning of free-standing nanometer thick Si3N4 films using reactive ion etch**
Guzel F., Pitchford W. H. , Kaur J.
Microsystem Technologies, vol.26, no.4, pp.1167-1172, 2020 (SCI-Expanded)
- VI. **Development of an On-Chip Antibiotic Permeability Assay With Single Molecule Detection Capability**
Guzel F., Citak F.
IEEE Transactions on Nanobioscience, vol.17, no.2, pp.155-160, 2018 (SCI-Expanded)
- VII. **Fabrication of Nanopores in an Ultra-Thin Polyimide Membrane for Biomolecule Sensing**
Guzel F., Avci H.
IEEE Sensors Journal, vol.18, no.7, pp.2641-2646, 2018 (SCI-Expanded)
- VIII. **Development of in-flow label-free single molecule sensors using planar solid-state nanopore integrated microfluidic devices**
Guzel F., Miles B.
Micro and Nano Letters, vol.13, no.9, pp.1352-1357, 2018 (SCI-Expanded)
- IX. **Recent advances in organ-on-a-chip technologies and future challenges: a review**
AVCI H., Dogan Guzel F., EROL S., Akpek A.
Turkish Journal of Chemistry, vol.42, no.3, pp.587-610, 2018 (SCI-Expanded)
- X. **Label-free in-flow detection of single DNA molecules using glass nanopipettes**
Gong X., Patil A. V. , Ivanov A. P. , Kong Q., Gibb T., Dogan F., Demello A. J. , Edel J. B.
Analytical Chemistry, vol.86, no.1, pp.835-841, 2014 (SCI-Expanded)
- XI. **Single molecule sensing with solid-state nanopores: Novel materials, methods, and applications**
Miles B. N. , Ivanov A. P. , Wilson K. A. , Dogan F., Japrun D., Edel J. B.
Chemical Society Reviews, vol.42, no.1, pp.15-28, 2013 (SCI-Expanded)
- XII. **Solid-state nanopores for biosensing with submolecular resolution**
Bahrami A., Doğan F., Japrun D., Albrecht T.
Biochemical Society Transactions, vol.40, no.4, pp.624-628, 2012 (SCI-Expanded)

Articles Published in Other Journals

- I. **HIGHLY SENSITIVE LABEL-FREE ELECTROCHEMICAL DETECTION OF HEAT SHOCK PROTEIN WITH**

LOW-COST SCREEN-PRINTED ELECTRODES

DOĞAN GÜZEL F., AKÇAKOCA İ., GHORBANPOOR H., Norouz Dizaji A., Öztürk Y., Blair E., KOCAGÖZ Z. T. , K Corrigan D., AVCI H.

Eskişehir Technical University Journal of Science and Technology A - Applied Sciences and Engineering, vol.22, no.4, pp.344-352, 2021 (Peer-Reviewed Journal)

II. Impedance testing of porous Si3N4 scaffolds for skeletal implant applications

Akbulut S. O. , Ghorbanpoor H., Özbek İptec B., Butterworth ., Avcioglu G., Kozaci L. D. , Topates G., Corrigan D. K. , Avci H., Doğan Güzel F.

SN Applied Sciences, vol.2, no.283, pp.1-6, 2020 (ESCI)

III. PRODUCTION AND ANALYSIS OF FUNCTIONAL SEBS NANOFIBERS BY ELECTROSPINNING

AVCI H., AKKULAK E., GERGEROGLU H., GHORBANPOOR H., BAKSAN B., DOĞAN GÜZEL F.

Eskişehir Osmangazi Üniversitesi Mühendislik ve Mimarlık Fakültesi Dergisi, vol.26, no.2, pp.40-46, 2018 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

I. A Novel Microheater Integrated Microelectrode Enhances The Sensitivity Of Conventional Electrochemical Nucleic Acid Biosensors.

AKÇAKOCA İ., GHORBANPOOR H., Öztürk Y., Norouz Dizaji A., Blair E., K Corrigan D., AVCI H., DOĞAN GÜZEL F. International Eurasian Conference on Biotechnology and Biochemistry (BioTechBioChem 2020), 16 December 2020

II. On-chip Continuous Magnetophoretic Bacterial Cell Wall Separation

Ozturk Y., Dizaji A. N. , DOĞAN GÜZEL F., Corrigan D.

15th NANOSCIENCE AND NANOTECHNOLOGY CONFERENCE, 3 - 06 November 2019

III. Impedance Testing of Porous Si3N4 Scaffolds for Skeletal Implant Applications

Akbulut O., Özbek B., Butterworth A., Ghorbanpoor H., Avcioglu G., KOZACI L. D. , TOPATEŞ G., Corrigan D., AVCI H., DOĞAN GÜZEL F.

5th International Conference on Engineering Sciences, 19 September 2019

IV. Label-free on-chip antibiotic permeability assay

kaur j., ozturk y., GHORBANPOOR H., TRABZON L., DOĞAN GÜZEL F.

4th International Congress on Biosensors, 8 - 09 July 2019

V. Integrated Microfluidic Chip Development for the Quantification of Antibiotic Permeability Rates through Bacteria Cell Wall

kaur j., ozturk y., GHORBANPOOR H., kaygusuz o., DARCAN C., TRABZON L., DOĞAN GÜZEL F.

2nd International Euroasian Conference on Biological and Chemical Sciences, 28 - 30 June 2019

VI. Fabrication of a Microheater for Bacterial Lysis

AKÇAKOCA İ., Bereketlioglu A., Norouz Dizaji A., GHORBANPOOR H., K Corrigan D., DOĞAN GÜZEL F.

1st International Conference on Advances in Mechanical and Mechatronics Engineering (ICAMMEN2018), 08 November 2018

VII. Novel Nanofibre Integrated SiN Scaffolds for Skeletal Implant Applications

Akbulut S. O. , Ozbek İptec B., Butterworth A., Ghorbanpoor H., Avcioglu G., Akbas Y., Oksuz S., KOZACI L. D. , TOPATEŞ G., DOĞAN GÜZEL F., et al.

14th Nanoscience and Nanotechnology Conference, 22 - 25 September 2018

VIII. Novel Nanofibre Integrated SiN Scaffolds for Skeletal Implant Applications

akbulut s. o. , özbek iptec b., BUTTERWORTH a., GHORBANPOOR H., AVCIOĞLU G., AKBAŞ Y., öksüz s., KOZACI L. D. , TOPATEŞ G., DOĞAN GÜZEL F., et al.

14th Nanoscience and Nanotechnology Conference, 22 - 25 September 2018

IX. An Electrochemical Biosensor for the Development of an Antibiotic Permeability Assay

DOĞAN GÜZEL F., Yıldırım H., Baraket A., Errachid A., Zine N.

International Congress on Chemistry and Materials Science, 5 - 07 October 2017

- X. **Nanopores as Single Molecule Sensing Tools**
DOĞAN GÜZEL F.
International Congress on Chemistry and Materials Science, 5 - 07 October 2017
- XI. **Nanopore integrated microfluidic biosensors with single molecule detection capability**
DOĞAN GÜZEL F., Citak F., Albrecht T., Edel B. J. , Winterhalter M.
3rd International Congress on Biosensors, 5 - 07 October 2016
- XII. **Nanopores as single molecule biosensors**
DOĞAN GÜZEL F.
Newton&Katip Celebi UK Turkey Researchers Link Workshop on Electrochemical Nucleic Acid Based Biosensors and Microfluidics For Healthcare Applications, 5 - 08 September 2016
- XIII. **Solid state nanopore embedded microfluidic chips**
DOĞAN GÜZEL F., Albrecht T., Edel J. B.
12th International Nanoscience and Nanotechnology Conference, 04 June 2010 - 06 June 2016
- XIV. **Biological nanopore integrated single molecule sensors**
DOĞAN GÜZEL F., Citak F., Winterhalter M.
12th International Nanoscience and Nanotechnology Conference, 4 - 06 June 2016
- XV. **Single channel studies to understand the antibiotic permeability of across multidrug resistance bacteria**
DOĞAN F., Samanta S., Pathania M., Pletzer D., D Agostino T., Al Nahas K., B Bajrai M., Ceccarelli M., van der Berg B., Winterhalter M.
International Multidisciplinary Symposium on Drug research & Development, 15 - 17 October 2015
- XVI. **Development of an on chip permeability assay for studying antibiotic permeability at single molecule level**
DOĞAN F., Citak F., Edel J. B. , Winterhalter M.
IMI Translocation Annual Meeting, Germany, 11 - 15 July 2015
- XVII. **On chip study of antibiotic resistance**
DOĞAN F., Thomas G., Bajaj H., Joshua B E., Mathias W.
IMI Translocation Annual Meeting, 18 - 21 July 2014
- XVIII. **Solid state nanopores**
DOĞAN F.
ITN-Marie Curie Training workshop 2014, 15 - 17 July 2014
- XIX. **The development of nanopore based electrochemical biosensors embedded into a microfluidic channel**
DOĞAN F., Albrecht T., Edel J. B.
Postgraduate Symposium on Nanotechnology, 16 December 2013
- XX. **The development of nanopore based electrochemical biosensor**
DOĞAN F., Albrecht T., Edel J. B.
Electrochemistry 2013 Conference, 3 - 05 September 2013
- XXI. **Solid state nanopore sensors with integrated electrodes**
Albrecht T., Bahrami A., Di Lecce S., DOĞAN F., Edel J. B. , Gibb T., Ivanov A., Skalkowska J.
223rd the Electrochemistry Society (ECS) Meeting, 12 - 13 May 2013
- XXII. **Development of a nanopore based biosensor embedded into a microfluidic channel**
DOĞAN F., Albrecht T., Edel J. B.
Zing Nanopore Conference, 6 - 10 February 2012
- XXIII. **A novel nanopore platform for DNA detection**
DOĞAN F., Edel J. B. , Albrecht T.
Nanopore workshop by International Society of Electrochemistry, 14 December 2011
- XXIV. **The development of a nanopore based biosensor embedded into a microfluidic channel**
DOĞAN F., Albrecht T., Edel J. B.
2nd International Biosensing Conference by Elsevier, 10 - 12 October 2011
- XXV. **Electrochemical detection of biomolecules using solid state nanopores**

DOĐAN F.

London and South East Region Postgraduate Electrochemistry Meeting & ISE Stallite Student Regional Symposium on Electrochemistry, 17 May 2011

Supported Projects

DOĐAN GÜZEL F., DİDARİAN R., KOZACI L. D. , Project Supported by Higher Education Institutions, Mikroakışkan Çiplerde Manyetik Alanın Varlığında Manyetik Parçacıkların Yönlenmesinin Teorik ve Deneysel İncelenmesi, 2022 - Continues

KOZACI L. D. , UÇAR A., NOROUZ DİZAJİ A., KILIÇ EREN M., DOĐAN GÜZEL F., Project Supported by Higher Education Institutions, Ucuz hızlı hassas ve işaretlemesiz bir metod olan SimpleStat ile HIF1alfa protein ölçümü, 2021 - Continues

Kozacı L. D. , Dođan Güzel F., Kılıç Eren M., Uçar A., Dijazı A. N. , Project Supported by Higher Education Institutions, Ucuz, hızlı, hassas ve işaretlemesiz bir metod olan SimpleStat ile HIF1-alfa protein ölçümü, 2021 - 2022

Dođan Güzel F., Other Supported Projects, Tam-Entegre ve Hızlı Bir Çip-Üstü Antibiyotik Duyarlılık Testi - Mikobakterium Tüberküloz İçin Örnek Bir Durum Analizi, 2018 - 2022

Metrics

Publication: 41

Citation (WoS): 9

Citation (Scopus): 373

H-Index (WoS): 1

H-Index (Scopus): 6