

Asst. Prof. BANU TAKTAK KARACA

Personal Information

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International Researcher IDs

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Publons / Web Of Science ResearcherID: AAW-9778-2020

ScopusID: 54890733900

Yoksis Researcher ID: 152970

Education Information

Post Doctorate, Istanbul Technical University, Turkey 2019 - Continues

Post Doctorate, University of Kansas, United States Of America 2014 - 2015

Doctorate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Turkey 2009 - 2015

Postgraduate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Turkey 2006 - 2009

Undergraduate, Ege University, Turkey 2000 - 2005

Dissertations

Doctorate, Molecular recognition based self assembly of engineered proteins on nanoscaled gold surfaces, Istanbul Technical University, Fen Bilimleri Enstitüsü, 2015

Postgraduate, Genetic design and synthesis of bi-functional protein for bio-nanotechnology, Istanbul Technical University, Fen Bilimleri Enstitüsü, 2009

Research Areas

Health Sciences, Natural Sciences

Academic Titles / Tasks

Assistant Professor, Marmara University, School of Medicine, Basic Medical Sciences, 2023 - Continues

Assistant Professor, İstanbul Atlas University, Mühendislik ve Doğa Bilimleri Fakültesi, Moleküler Biyoloji ve Genetik, 2021 - 2023

Assistant Professor, Biruni University, Mühendislik ve Doğa Bilimleri Fakültesi, Moleküler Biyoloji ve Genetik, 2018 - 2020

Research Assistant, Istanbul Technical University, Fen-Edebiyat, Moleküler Biyoloji Ve Genetik, 2006 - 2015

Academic and Administrative Experience

Head of Department, İstanbul Atlas University, 2021 - 2023

Head of Department, İstanbul Atlas University, 2021 - 2023

Courses

Nanomedicine and Nanotherapeutics, Undergraduate, 2023 - 2024

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Probing Selective Self-Assembly of Putrescine Oxidase with Controlled Orientation Using a Genetically Engineered Peptide Tag**
Kamathewatta N. J. B., Nguyen T. M., Lietz R., Hughes T., Taktak Karaca B., Deay D. O., Richter M. L., Tamerler C., Berrie C. L.
Langmuir, vol.37, no.24, pp.7536-7547, 2021 (SCI-Expanded)
- II. **Self-Immobilized Putrescine Oxidase Biocatalyst System Engineered with a Metal Binding Peptide**
Kamathewatta N. J. B., Deay D. O., TAKTAK KARACA B., Seibold S., Nguyen T. M., Tomás B., Richter M. L., Berrie C. L., Tamerler C.
Langmuir, vol.36, no.40, pp.11908-11917, 2020 (SCI-Expanded)
- III. **Biosilver nanoparticle interface offers improved cell viability**
VanOosten S. K., YÜCA YILMAZ E., TAKTAK KARACA B., Boone K., Snead M. L., Spencer P., Tamerler C.
Surface Innovations, vol.4, no.3, pp.121-132, 2016 (SCI-Expanded)
- IV. **Coupling infusion and gyration for the nanoscale assembly of functional polymer nanofibers integrated with genetically engineered proteins**
Zhang S., Karaca B., Vanoosten S. K., YÜCA YILMAZ E., Mahalingam S., Edirisinghe M., Tamerler C.
Macromolecular Rapid Communications, vol.36, no.14, pp.1322-1328, 2015 (SCI-Expanded)
- V. **Direct bioelectrocatalysis at the interfaces by genetically engineered dehydrogenase**
Yucesoy D. T., Karaca B., Cetinel S., Caliskan H. B., Adali E., Gül Karagüler N., Tamerler C.
Bioinspired, Biomimetic and Nanobiomaterials, vol.4, no.1, pp.79-89, 2015 (SCI-Expanded)
- VI. **Fabrication of hierarchical hybrid structures using bio-enabled layer-by-layer self-assembly**
Hnilova M., Karaca B., Park J., Jia C., Wilson B. R., Sarikaya M., Tamerler C.
Biotechnology and Bioengineering, vol.109, no.5, pp.1120-1130, 2012 (SCI-Expanded)

Articles Published in Other Journals

- I. **Elucidating the roles of naturally occurring silent mutations in Polycystic Ovary Syndrome (PCOS)**
Gümüşgöl M., Şahin Ş., TURAN H., TAKTAK KARACA B., Yenenler-Kutlu A.
Meta Gene, vol.25, 2020 (ESCI)
- II. **Modular Peptide-Based Hybrid Nanoprobes for Bio-Imaging and Bio-Sensing**
TAKTAK KARACA B., VanOosten S. K., Tamerler C.
MRS Proceedings, vol.1621, pp.155-161, 2014 (Peer-Reviewed Journal)

Books & Book Chapters

- I. **Addressable Biological Functionalization of Inorganics: Materials-Selective Fusion Proteins in Bio-nanotechnology**
TAKTAK KARACA B., Hnilova M., Tamerler C.
in: Bioinspired Nanotechnology From Surface Analysis to Applications, Knecht, Marc R., Walsh, Tiffany R., Editor, Springer, New York, NY, New York, pp.221-255, 2014

Refereed Congress / Symposium Publications in Proceedings

I. Bio-functionalized (Ag-ser) nanoparticle synthesis and characterization for biomedical platforms

Saraçođlu M., Bacnođlu M., Mertdinç Ülküseven S., Timur S. İ., TAKTAK KARACA B.

6th World Congress on New Technologies, NewTech 2020, Virtual, Online, 19 - 21 August 2020

Supported Projects

Taktak Karaca B., TUBITAK Project, AroBioCal: Investigation of the Effect of Biologically Functionalised Silver Nanoparticles (Bio- AgNP) on Callus Formation of Aronia (Aronia melanocarpa) Plant (AroBioCal: Biyolojik Olarak Fonksiyonlaştırılmış Gümüş Nanopartiküllerinin (Bio- AgNP) Aronya (Aronia melanocarpa) Bitkisi Kallus Oluşumu Üzerinde Etkisinin İncelenmesi) , 2023 - 2024

Taktak Karaca B., TUBITAK Project, Nano-biyoteknoloji tabanlı bir remineralizasyon sisteminin geliştirilmesi ve adezivlerin dentine bağlanma dayanıklılıđının artırılmasına yönelik uygulaması, 2021 - 2024

Taktak Karaca B., TUBITAK Project, Antikanser Etkili ve Peptidomimetik Yapıda HoxA9-Pbx1/3 Protein-Protein Etkileşim İnhibitörlerinin Geliştirilmesi, 2021 - 2024

Taktak Karaca B., TUBITAK Project, Biosensor Design for Determination of Bacterial Metabolic Activity by Impedance Measurement, 2018 - 2020

Taktak Karaca B., Other International Funding Programs, Dental and Craniofacial Research, 2014 - 2015

Taktak Karaca B., TUBITAK Project, GEPI-protein problemleri kullanılarak yeni biyosensor sistemlerinin tasarımı,, 2013 - 2014

Taktak Karaca B., TUBITAK Project, 1059B141300148 2214-A Yurt Dışı Araştırma Burs Programı (Doktora öğrencileri için), 2013 - 2014

Metrics

Publication: 11

Citation (Scopus): 108

H-Index (Scopus): 4