Asst. Prof. RESUL ÖZDEMİR

Personal Information

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Education Information

Post Doctorate, Universiteit Gent, Sciences, Chemistry, Belgium 2021 - 2022
Doctorate, Abdullah Gul University, Fen Bilimleri Enstitüsü, -, Turkey 2017 - 2021
Postgraduate, Abdullah Gul University, Fen Bilimleri Enstitüsü, -, Turkey 2014 - 2016
Undergraduate, Ankara University, Fen Fakültesi, Kimya Bölümü, Turkey 2004 - 2008

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, FUNCTIONALIZED LOW LUMO [1]BENZOTHIENO[3,2-B][1]BENZOTHIOPHENE (BTBT)-BASED MOLECULAR SEMICONDUCTORS FOR ORGANIC FIELD EFFECT TRANSISTORS, Abdullah Gul University, Fen Bilimleri Enstitüsü, -, 2022
Postgraduate, Design, synthesis, and characterization of n-type and ambipolar small molecules as air-stable and solution-processable semiconductors in ofets, Abdullah Gul University, Fen Bilimleri Enstitüsü, -, 2016

Research Areas

Semiconductor and Superconductor Materials, Polymeric Materials, Nanomaterials, Chemistry of Aromatic Compounds

Academic Titles / Tasks

Assistant Professor, Eskisehir Osmangazi University, Eskişehir Meslek Yüksekokulu, Elektronik Ve Otomasyon, 2022 - Continues
Research Assistant, Abdullah Gul University, Fen Bilimleri Enstitüsü, -, 2015 - 2021

Academic and Administrative Experience

Head of Department, Eskisehir Osmangazi University, Eskişehir Meslek Yüksekokulu, Elektronik Ve Otomasyon, 2022 - Continues

Published journal articles indexed by SCI, SSCI, and AHCI

I. **Multifunctional Anionic Zn(II)-MOF for Selective CO2 Adsorption, Cationic Dye Removal, and Luminescence-Based pH Sensing**
Kavak E., Şevik M., Değirmenci G., Alp Arici T., ÖZDEMİR R., ARICI M.
Crystal Growth and Design, vol.24, no.6, pp.2415-2424, 2024 (SCI-Expanded)

II. **Quantum Dot Patterning and Encapsulation by Maskless Lithography for Display Technologies**
Ozdemir R., Van Avermaet H., Erdem O., Schiettecatte P., Hens Z., Aubert T.
ACS APPLIED MATERIALS & INTERFACES, vol.15, no.7, pp.9629-9637, 2023 (SCI-Expanded)

III. **A dopant-free 2,7-dioctyl[1]benzothieno[3,2-b][1]benzothiophene (C8-BTBT)-based hole transporting layer for highly stable perovskite solar cells with efficiency over 22%**
Kaya I. C., ÖZDEMİR R., USTA H., Sonmezoglu S.
JOURNAL OF MATERIALS CHEMISTRY A, vol.10, no.23, pp.12464-12472, 2022 (SCI-Expanded)

IV. **Organic Light-Emitting Physically Unclonable Functions**
Kayaci N., ÖZDEMİR R., Kalay M., KİREMİTLER N. B., USTA H., ÖNSES M. S.
ADVANCED FUNCTIONAL MATERIALS, vol.32, no.14, 2022 (SCI-Expanded)

V. **Meso-pi-Extended/Deficient BODIPYs and Low-Band-Gap Donor-Acceptor Copolymers for Organic Optoelectronics**
Can A., Choi G., ÖZDEMİR R., Park S., Park J. S., Lee Y., DENEME İ., MUTLUGÜN E., Kim C., Kim B. J., et al.
ACS APPLIED POLYMER MATERIALS, vol.4, no.3, pp.1991-2005, 2022 (SCI-Expanded)

VI. **Interplay between Charge Injection, Electron Transport, and Quantum Efficiency in Ambipolar Trilayer Organic Light-Emitting Transistors**
Moschetto S., Benvenuti E., USTA H., ÖZDEMİR R., Facchetti A., Muccini M., Prosa M., Toffanin S.
ADVANCED MATERIALS INTERFACES, vol.9, no.5, 2022 (SCI-Expanded)

VII. **Engineering functionalized low LUMO [1]benzothieno[3,2-b][1]benzothiophenes (BTBTs): unusual molecular and charge transport properties**
ÖZDEMİR R., Ahn K., DENEME İ., Zorlu Y., Kim D., Kim M., USTA H.
JOURNAL OF MATERIALS CHEMISTRY C, vol.8, no.43, pp.15253-15267, 2020 (SCI-Expanded)

VIII. **A hybridized local and charge transfer excited state for solution-processed non-doped green electroluminescence based on oligo(p-phenyleneethynylene)**
USTA H., Alimli D., ÖZDEMİR R., Tekin E., ALKAN F., Kacar R., Altas A. G., Dabak S., Gurek A. G., MUTLUGÜN E., et al.
JOURNAL OF MATERIALS CHEMISTRY C, vol.8, no.24, pp.8047-8060, 2020 (SCI-Expanded)

IX. **Molecular engineering of organic semiconductors enables noble metal-comparable SERS enhancement and sensitivity**
DEMİREL G., Gieseking R. L. M., ÖZDEMİR R., Kahmann S., Loi M. A., Schatz G. C., Facchetti A., USTA H.
NATURE COMMUNICATIONS, vol.10, 2019 (SCI-Expanded)

X. **Highly Efficient Deep-Blue Electroluminescence Based on a Solution-Processable A-pi-D-pi-A Oligo(p-phenyleneethynylene) Small Molecule**
USTA H., Alimli D., ÖZDEMİR R., Dabak S., Zorlu Y., ALKAN F., Tekin E., Can A.
ACS APPLIED MATERIALS & INTERFACES, vol.11, no.47, pp.44474-44486, 2019 (SCI-Expanded)

XI. **A Solution-Processable meso-Phenyl-BODIPY-Based n-Channel Semiconductor with Enhanced Fluorescence Emission**
Ozcan E., Ozdemir M., Ho D., Zorlu Y., ÖZDEMİR R., Kim C., USTA H., Cosut B.
CHEMPLUSCHEM, vol.84, no.9, pp.1423-1431, 2019 (SCI-Expanded)

XII. **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)

XIII. **BODIPY-Based Semiconducting Materials for Organic Bulk Heterojunction Photovoltaics and Thin-Film Transistors**
Ho D., ÖZDEMİR R., Kim H., Earmme T., USTA H., Kim C.
CHEMPLUSCHEM, vol.84, no.1, pp.18-37, 2019 (SCI-Expanded)

XIV. **Triisopropylsilylethynyl-substituted indenofluorenes: carbonyl versus dicyanovinylene functionalization in one-dimensional molecular crystals and solution-processed n-channel OFETs**
ÖZDEMİR R., Park S., DENEME İ., Park Y., Zorlu Y., Alidagi H. A., Harmandar K., Kim C., USTA H.
ORGANIC CHEMISTRY FRONTIERS, vol.5, no.20, 2018 (SCI-Expanded)

XV. **Frequency and electric field controllable photodevice: FYTRONIX device**
TATAROĞLU A., Al-Sehemi A. G., Ozdemir M., ÖZDEMİR R., USTA H., Al-Ghamdi A. A., Farooq W. A., Yakuphanoglu F.
PHYSICA B-CONDENSED MATTER, vol.519, pp.53-58, 2017 (SCI-Expanded)

XVI. **A Solution-Processable Liquid-Crystalline Semiconductor for Low-Temperature-Annealed Air-Stable N-Channel Field-Effect Transistors**
ÖZDEMİR R., Choi D., Ozdemir M., Kim H., Kostakoglu S. T., ERKARTAL M., Kim H., Kim C., USTA H.
CHEMPHYSCHEM, vol.18, no.7, pp.850-861, 2017 (SCI-Expanded)

XVII. **Ultralow bandgap molecular semiconductors for ambient-stable and solution-processable ambipolar organic field-effect transistors and inverters**
ÖZDEMİR R., Choi D., Ozdemir M., Kwon G., Kim H., Sen U., Kim C., USTA H.
JOURNAL OF MATERIALS CHEMISTRY C, vol.5, no.9, pp.2368-2379, 2017 (SCI-Expanded)

XVIII. **Ambipolar small molecular semiconductor-based heterojunction diode**
Ocaya R. O., Ozdemir M., ÖZDEMİR R., Al-Ghamdi A., USTA H., Farooq W. A., Yakuphanoglu F.
SYNTHETIC METALS, vol.221, pp.48-54, 2016 (SCI-Expanded)

XIX. **Trans-cis isomerization assisted synthesis of solution-processable yellow fluorescent maleic anhydrides for white-light generation**
Ozdemir M., GENÇ S., ÖZDEMİR R., ALTINTAS Y., Citir M., Sen U., MUTLUGÜN E., USTA H.
SYNTHETIC METALS, vol.210, pp.192-200, 2015 (SCI-Expanded)

XX. **Synthesis, Characterization, and Antimicrobial Activities of New N-(2-hydroxy-1-naphthalidene)-amino Acid (L-Tyrosine, L-Arginine, and L-Lysine) Schiff Bases and Their Manganese(III) Complexes**
Sakiyan I., ÖZDEMİR R., Ogutcu H.
SYNTHESIS AND REACTIVITY IN INORGANIC METAL-ORGANIC AND NANO-METAL CHEMISTRY, vol.44, no.3, pp.417-423, 2014 (SCI-Expanded)

Congress and Symposium Activities

15th International Conference for Organic Electronics in Hasselt, Attendee, Hasselt, Belgium, 2019