

## Arş.Gör. RESUL ÖZDEMİR

### Kişisel Bilgiler

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### Uluslararası Araştırmacı ID'leri

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Publons / Web Of Science ResearcherID: A-3227-2016

Yoksis Araştırmacı ID: 224806

### Eğitim Bilgileri

Doktora, Abdullah Gül Üniversitesi, Fen Bilimleri Enstitüsü, Malzeme Bilimi Ve Makine Mühendisliği, Türkiye 2017 - Devam Ediyor

Yüksek Lisans, Abdullah Gül Üniversitesi, Fen Bilimleri Enstitüsü, İleri Malzeme Ve Nanoteknoloji, Türkiye 2014 - 2016

Lisans, Ankara Üniversitesi, Fen Fakültesi, Kimya, Türkiye 2004 - 2008

### Yabancı Diller

İngilizce, B2 Orta Üstü

### Sertifika, Kurs ve Eğitimler

Eğitim Yönetimi ve Planlama, Stres Yönetimi, Sirius Eğitim Danışmanlık, 2014

Eğitim Yönetimi ve Planlama, Zaman Yönetimi, Sirius Eğitim Danışmanlık, 2014

Eğitim Yönetimi ve Planlama, Ekip Çalışması, Sirius Eğitim Danışmanlık, 2014

Yabancı Dil, Toefl, Geos Language Institute, 2013

### Yaptığı Tezler

Yüksek Lisans, Design, Synthesis, and Characterization of N-Type and Ambipolar Small Molecules as Air-Stable and Solution-Processable Semiconductors in OFETs, Abdullah Gül Üniversitesi, Fen Bilimleri Enstitüsü, İleri Malzemeler Ve Nanoteknoloji, 2016

### Araştırma Alanları

Metalurji ve Malzeme Mühendisliği, Malzeme Bilimi ve Mühendisliği, Kimya, Organik Kimya, Temel Bilimler, Mühendislik ve Teknoloji

**SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler**

- I. **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., SÖNMEZOĞLU S.  
JOURNAL OF MATERIALS CHEMISTRY A, cilt.10, ss.12464-12472, 2022 (SCI-Expanded)
- II. **Organic Light-Emitting Physically Unclonable Functions**  
Kayaci N., ÖZDEMİR R., Kalay M., KİREMİTLER N. B., USTA H., ÖNSES M. S.  
ADVANCED FUNCTIONAL MATERIALS, cilt.32, 2022 (SCI-Expanded)
- III. **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, cilt.4, sa.3, ss.1991-2005, 2022 (SCI-Expanded)
- IV. **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, cilt.9, sa.5, 2022 (SCI-Expanded)
- V. **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, cilt.8, sa.43, ss.15253-15267, 2020 (SCI-Expanded)
- VI. **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, cilt.8, sa.24, ss.8047-8060, 2020 (SCI-Expanded)
- VII. **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, cilt.11, sa.47, ss.44474-44486, 2019 (SCI-Expanded)
- VIII. **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, cilt.84, sa.9, ss.1423-1431, 2019 (SCI-Expanded)
- IX. **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., Demirel G., Hong J., et al.  
CHEMISTRY OF MATERIALS, cilt.31, sa.14, ss.5254-5263, 2019 (SCI-Expanded)
- X. **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, cilt.84, sa.1, ss.18-37, 2019 (SCI-Expanded)
- XI. **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, cilt.5, sa.20, 2018 (SCI-Expanded)
- XII. **Frequency and electric field controllable photodevice: FYTRONIX device**  
Tataroğlu A., Al-Sehemi A. G., ÖZDEMİR M., ÖZDEMİR R., USTA H., AL-GHAMDI A. A., FAROOQ W., Yakuphanoglu F.

Physica B: Condensed Matter, cilt.519, ss.53-58, 2017 (SCI-Expanded)

- XIII. **A Solution-Processable Liquid-Crystalline Semiconductor for Low-Temperature-Annealed Air-Stable N-Channel Field-Effect Transistors**  
ÖZDEMİR R., CHOI D., ÖZDEMİR M., KIM H., Kostakoglu S. T., ERKARTAL M., KIM H., Kim C., USTA H.  
CHEMPHYSICHEM, cilt.18, sa.7, ss.850-861, 2017 (SCI-Expanded)
- XIV. **Ultralow bandgap molecular semiconductors for ambient-stable and solution-processable ambipolar organic field-effect transistors and inverters**  
ÖZDEMİR R., CHOI D., ÖZDEMİR M., KWON G., KIM H., SEN U., KIM C., USTA H.  
JOURNAL OF MATERIALS CHEMISTRY C, cilt.5, sa.9, ss.2368-2379, 2017 (SCI-Expanded)
- XV. **Ambipolar small molecular semiconductor-based heterojunction diode**  
OCAÑA R., ÖZDEMİR M., ÖZDEMİR R., AL-GHAMDI A., USTA H., FAROOQ W., Yakuphanoglu F.  
Synthetic Metals, cilt.221, ss.48-54, 2016 (SCI-Expanded)
- XVI. **Trans-cis isomerization assisted synthesis of solution-processable yellow fluorescent maleic anhydrides for white-light generation**  
Özdemir M., GENÇ S., ÖZDEMİR R., ALTINTAS Y., Citir M., Sen U., MUTLUGÜN E., USTA H.  
SYNTHETIC METALS, cilt.210, ss.192-200, 2015 (SCI-Expanded)
- XVII. **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., Ozdemir R., OGUTCU H.  
SYNTHESIS AND REACTIVITY IN INORGANIC METAL-ORGANIC AND NANO-METAL CHEMISTRY, cilt.44, sa.3, ss.417-423, 2014 (SCI-Expanded)

## Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar

- I. **DICYANOVINYLENE FUNCTIONALIZED AIR STABLE N-TYPEORGANIC FIELD EFFECT TRANSISTORS**  
ÖZDEMİR R., ardic alidagi h., USTA H.  
3rd International Conference on Material Science and Technology in Cappadocia, 17 - 19 Eylül 2018
- II. **SOLUTION-PROCESSABLE AMBIPOLAR SMALL MOLECULARSEMICONDUCTOR BASED ONDIETHYNYLINDENO[1,2-B]FLUORENE-6,12-DIONE**  
ÖZDEMİR R., USTA H.  
3rd International Conference on Material Science and Technology in Cappadocia, 17 - 19 Eylül 2018
- III. **Novel Small Molecule Based Semiconductors for Solution Processable and Ambient Stable Ambipolar Organic Field Effect Transistors**  
ÖZDEMİR R., Ozdemir M., Kim C., USTA H.  
Ancon-International Congress on Chemistry and Materials Science, Ankara, Türkiye, 5 - 07 Ekim 2017
- IV. **AMBIPOLAR SMALL MOLECULAR SEMICONDUCTORS FOR FIELD EFFECT TRANSISTOR AND COMPLEMENTARY LIKE INVERTER APPLICATIONS**  
ÖZDEMİR R., Deneme İ., Ozdemir M., USTA H.  
The International Conference on Material Science and Technology in Cappadocia, 11 - 13 Ekim 2017
- V. **MOLECULAR SEMICONDUCTORS BASED ON LADDER TYPE ACCEPTOR CORE AND THIOPHENEDONOR UNITS**  
ÖZDEMİR R., Ozdemir M., USTA H.  
The International Conference on Material Science and Technology in Cappadocia, 11 - 13 Ekim 2017
- VI. **BODIPY Based Small Molecules for Solution Processed N Channel Organic Thin Film Transistors**  
Özdemir M., ÖZDEMİR R., USTA H.  
Nanoscience and Nanotechnology for Next Generation (NanoNG-2016), Antalya, Türkiye, 20 - 22 Ekim 2016, ss.35
- VII. **Small Bandgap Molecular Semiconductors for Ambient Stable and Solution Processable Ambipolar Organic Field Effect Transistors**  
ÖZDEMİR R., Özdemir M., USTA H.  
Nanoscience and Nanotechnology for Next Generation (NanoNG-2016), Antalya, Türkiye, 20 - 22 Ekim 2016, ss.33

VIII. **DESIGN SYNTHESIS AND CHARACTERIZATION OF THREE NEW DISUBSTITUTED MOLECULES BASED ON INDENO 1 2 B FLUORENE 6 12 DIONE AND THIOPHENE BUILDING BLOCKS IMPROVEMENT OF AMBIPOLAR CHARGE CARRIER MOBILITIES VIA TAILORING OF ALKYL SUBSTITUENTS**

Özdemir M., ÖZDEMİR R., Kim C., USTA H.

International Conference on Materials Science and Technology (IMSTEC 2016), Nevşehir, Türkiye, 6 - 08 Nisan 2016, ss.996

IX. **Blue Luminescence from CdS ZnS Core Shell Nano crystals**

ÖZDEMİR R.

5th. National Nanoscience and Nanotechnology, Eskişehir, Türkiye, 8 - 12 Haziran 2009

## **Desteklenen Projeler**

USTA H., ÖZDEMİR R., Yükseköğretim Kurumları Destekli Proje, Organik İnce-Film Transistör OTFT Uygulamaları için İndenoflorendiketon Temelli Moleküler Yarı-İletken Geliştirilmesi, 2016 - 2017

## **Bilimsel Kuruluşlardaki Üyelikler / Görevler**

Kimyagerler Derneği, Üye, 2009 - Devam Ediyor

## **Metrikler**

Yayın: 26

Atıf (WoS): 180

Atıf (Scopus): 176

H-İndeks (WoS): 8

H-İndeks (Scopus): 8

## **Kongre ve Sempozyum Katılımı Faaliyetleri**

ANCON 2017, Katılımcı, Ankara, Türkiye, 2017

IMSTEC 2017, Katılımcı, Ankara, Türkiye, 2017

NanoNG 2016, Katılımcı, Antalya, Türkiye, 2016

IMSTEC 2016, Katılımcı, Nevşehir, Türkiye, 2016

NanoTr5, Katılımcı, Eskişehir, Türkiye, 2009