

Prof. HAKAN USTA

Personal Information

Office Phone: [+90 352 224 8800](tel:+903522248800) Extension: 7005

Fax Phone: [+90 352 338 8828](tel:+903523388828)

Web: <http://people.agu.edu.tr/hakanusta/>

Address: Abdullah Gül Üniversitesi Mühendislik Fakültesi Sümer Kampüsü Kocasinan, Kayseri, 38080

Education Information

Doctorate, Northwestern University, Weinberg College Of Arts And Sciences, Kimya Bölümü, United States Of America
2004 - 2008

Under Graduate, İhsan Doğramacı Bilkent Üniversitesi, Fen Fakültesi, Kimya Bölümü, Turkey 2000 - 2004

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Solution-Processable Molecular and Polymeric Semiconductors for Ambient-Stable Organic Field-Effect Transistors, Northwestern University, Weinberg School Of Science And Arts, Kimya Bölümü, 2008

Research Areas

Metallurgical and Materials Engineering, Material science and engineering, Semiconductor and Superconductor Materials, Optical Properties, Polymeric Materials, Nanomaterials, Structure-Property Relationship, Chemistry, Organic Chemistry, Chemistry of Aromatic Compounds, Natural Sciences, Engineering and Technology

Academic Titles / Tasks

Professor, Abdullah Gul University, Mühendislik Fakültesi, Malzeme Bilimi ve Nanoteknoloji Mühendisliği, 2019 - Continues

Associate Professor, Abdullah Gul University, Malzeme Bilimi Ve Nanoteknoloji Mühendisliği, 2014 - 2019

Assistant Professor, Abdullah Gül Üniversitesi, Mühendislik Ve Doğa Bilimleri Fakültesi, Malzeme Bilimi Ve Nanoteknoloji Mühendisliği, 2013 - 2014

Research Assistant, Northwestern University, Weinberg School Of Science And Arts, Chemistry, 2004 - 2008

Research Assistant, Texas A&M University, Faculty Of Science, Chemistry, 2002 - 2002

Professional Experience

Courses

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- **Microstructural modulation of organic passivation layers for metal oxide semiconductors to achieve high bias stability**
Ho D., Jeong H., Minh Nhut Le M. N. L., USTA H., Kwon H., Kim M., Kim C.
JOURNAL OF MATERIALS CHEMISTRY C, vol.8, pp.11209-11222, 2020 (Journal Indexed in SCI)
- **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, pp.8047-8060, 2020 (Journal Indexed in SCI)
- **Molecular engineering of organic semiconductors enables noble metal-comparable SERS enhancement and sensitivity**
Demirel G., Giesecking R. L. M., Ozdemir R., Kahmann S., Loi M. A., Schatz G. C., Facchetti A., USTA H.
NATURE COMMUNICATIONS, vol.10, 2019 (Journal Indexed in SCI)
- **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, pp.44474-44486, 2019 (Journal Indexed in SCI)
- **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, pp.1423-1431, 2019 (Journal Indexed in SCI)
- **Electrochemical polymerization of ambipolar carbonyl-functionalized indenofluorene with memristive properties**
Figa V., USTA H., Macaluso R., Salzner U., Ozdemir M., Kulyk B., Krupka O., Bruno M.
OPTICAL MATERIALS, vol.94, pp.187-195, 2019 (Journal Indexed in SCI)
- **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, vol.31, pp.5254-5263, 2019 (Journal Indexed in SCI)
- **Ultrahigh Vacuum Self-Assembly of Rotationally Commensurate C8-BTBT/MoS2/Graphene Mixed-Dimensional Heterostructures**
Liu X., Balla I., Sangwan V. K., USTA H., Facchetti A., Marks T. J., Hersam M. C.
CHEMISTRY OF MATERIALS, vol.31, pp.1761-1766, 2019 (Journal Indexed in SCI)
- **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, pp.18-37, 2019 (Journal Indexed in SCI)
- **Triisopropylsilylethynyl-substituted indenofluorenes: carbonyl versus dicyanovinylene functionalization in one-dimensional molecular crystals and solution-processed n-channel OFETs**
ÖZDEMİR R., PARK S., DENEME I., PARK Y., Zorlu Y., ALIDAGI H. A., Harmandar K., Kim C., USTA H.
ORGANIC CHEMISTRY FRONTIERS, vol.5, 2018 (Journal Indexed in SCI)
- **Semiconducting Copolymers Based on meso-Substituted BODIPY for Inverted Organic Solar Cells and Field-Effect Transistors**
Ozdemir M., Kim S. W., Kim H., Kim M., Kim B. J., Kim C., USTA H.
ADVANCED ELECTRONIC MATERIALS, vol.4, 2018 (Journal Indexed in SCI)
- **The design and fabrication of supramolecular semiconductor nanowires formed by**

benzothienobenzothiophene (BTBT)-conjugated peptides

Khalily M. A. , USTA H., Ozdemir M., Bakan G., Dikecoglu F. B. , Edwards-Gayle C., Hutchinson J. A. , Hamley I. W. , DANA A., Guler M. O.

NANOSCALE, vol.10, pp.9987-9995, 2018 (Journal Indexed in SCI)

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, pp.5314-5335, 2018 (Journal Indexed in SCI)

Optimized Activation of Solution-Processed Amorphous Oxide Semiconductors for Flexible Transparent Conductive Electrodes

Choi B. D. , Park J., Baeg K., Kang M., Heo J. S. , Kim S., Won J., Yu S., Ahn K., Lee T. H. , et al.

ADVANCED ELECTRONIC MATERIALS, vol.4, 2018 (Journal Indexed in SCI)

Nanostructured organic semiconductor films for molecular detection with surface-enhanced Raman spectroscopy

Yilmaz M., Babur E., OZDEMİR M., Giesecking R. L. , Dede Y., Tamer U., Schatz G. C. , Facchetti A., USTA H., Demirel G.

NATURE MATERIALS, vol.16, pp.918-925, 2017 (Journal Indexed in SCI)

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, vol.519, pp.53-58, 2017 (Journal Indexed in SCI)

A new rod-shaped BODIPY-acetylene molecule for solution-processed semiconducting microribbons in n-channel organic field-effect transistors

Ozdemir M., Choi D., ZORLU Y., ÇOŞUT B., Kim H., Kim C., USTA H.

NEW JOURNAL OF CHEMISTRY, vol.41, pp.6232-6240, 2017 (Journal Indexed in SCI)

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., ŞEN Ü., USTA H., DEMİREL G.

ACS APPLIED MATERIALS & INTERFACES, vol.9, pp.18199-18206, 2017 (Journal Indexed in SCI)

Insights Into Interface Treatments in p-Channel Organic Thin-Film Transistors Based on a Novel Molecular Semiconductor

Liguori R., USTA H., Fusco S., Facchetti A., Licciardo G. D. , Di Benedetto L., Rubino A.

IEEE TRANSACTIONS ON ELECTRON DEVICES, vol.64, pp.2338-2344, 2017 (Journal Indexed in SCI)

A Solution-Processable Liquid-Crystalline Semiconductor for Low-Temperature-Annealed Air-Stable N-Channel Field-Effect Transistors

ÖZDEMİR R., CHOI D., OZDEMİR M., KIM H., Kostakoglu S. T. , ERKARTAL M., KIM H., Kim C., USTA H.

CHEMPHYSICHEM, vol.18, pp.850-861, 2017 (Journal Indexed in SCI)

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, vol.5, pp.2368-2379, 2017 (Journal Indexed in SCI)

Enhanced mass transfer rate and solubility of methane via addition of alcohols for Methylosinus trichosporium OB3b fermentation

Kim K., Kim Y., Yang J., Ha K., USTA H., Lee J., Kim C.

JOURNAL OF INDUSTRIAL AND ENGINEERING CHEMISTRY, vol.46, pp.350-355, 2017 (Journal Indexed in SCI)

From 2-methylimidazole to 1,2,3-triazole: a topological transformation of ZIF-8 and ZIF-67 by post-synthetic modification

ERKARTAL M., ERKILIC U., TAM B., USTA H., YAZAYDIN O., HUPP J. T. , Farha O. K. , Sen U.

Chemical Communications, vol.53, pp.2028-2031, 2017 (Journal Indexed in SCI)

Ambipolar small molecular semiconductor-based heterojunction diode

OÇAYA R., ÖZDEMİR M., ÖZDEMİR R., AL-GHAMDI A., USTA H., FAROOQ W., Yakuphanoglu F.

Synthetic Metals, vol.221, pp.48-54, 2016 (Journal Indexed in SCI)

pi-Conjugated donor-acceptor small molecule thin-films on gold electrodes for reducing the metal

work-function

Azum N., Taib L. A., Al Angari Y. M., Asiri A. M., Denti M., Zhao W., USTA H., Facchetti A.

THIN SOLID FILMS, vol.616, pp.320-327, 2016 (Journal Indexed in SCI)

● **Anhydrous proton conducting poly(vinyl alcohol) (PVA)/poly(2-acrylamido-2-methylpropane sulfonic acid) (PAMPS)/1,2,4-triazole composite membrane**

ERKARTAL M., Asian A., ERKILIC U., DADI Ş., Yazaydin O., USTA H., SEN U.

INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.41, pp.11321-11330, 2016 (Journal Indexed in SCI)

● **Solution-Processable BODIPY-Based Small Molecules for Semiconducting Microfibers in Organic Thin-Film Transistors**

Ozdemir M., Choi D., Kwon G., ZORLU Y., ÇOŞUT B., Kim H., Facchetti A., Kim C., USTA H.

ACS APPLIED MATERIALS & INTERFACES, vol.8, pp.14077-14087, 2016 (Journal Indexed in SCI)

● **Novel method based on photothermal cleavage of thermolabile molecules on Au nanoparticles for controlled release**

Goren E., ÇAVUŞOĞLU H., Yavuz E., USTA H., ÇITIR M., YAVUZ M. S.

ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY, vol.251, 2016 (Journal Indexed in SCI)

● **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 (Journal Indexed in SCI)

● **Naphthalene diimide-based polymeric semiconductors. Effect of chlorine incorporation and n-channel transistors operating in water**

Ryu G., Chen Z., USTA H., Noh Y., Facchetti A.

MRS COMMUNICATIONS, vol.6, pp.47-60, 2016 (Journal Indexed in SCI)

● **Proton conducting poly(vinyl alcohol) (PVA)/poly(2-acrylamido-2-methylpropane sulfonic acid) (PAMPS)/zeolitic imidazolate framework (ZIF) ternary composite membrane**

ERKARTAL M., USTA H., Citir M., Sen U.

JOURNAL OF MEMBRANE SCIENCE, vol.499, pp.156-163, 2016 (Journal Indexed in SCI)

● **Design, synthesis, and characterization of alpha,omega-disubstituted indeno[1,2-b]fluorene-6,12-dione-thiophene molecular semiconductors. Enhancement of ambipolar charge transport through synthetic tailoring of alkyl substituents**

OZDEMİR M., CHOI D., KWON G., Zorlu Y., KIM H., KIM M., SEO S., Sen U., Citir M., KIM C., et al.

RSC ADVANCES, vol.6, pp.212-226, 2016 (Journal Indexed in SCI)

● **Logarithmic organic photodetectors**

Elgazzar E., OZDEMİR M., USTA H., AL-GHAMDI A. A., Dere A., EL-TANTAWY F., YAKUPHANOĞLU F.

SYNTHETIC METALS, vol.210, pp.288-296, 2015 (Journal Indexed in SCI)

● **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, vol.210, pp.192-200, 2015 (Journal Indexed in SCI)

● **Development of highly transparent Pd-coated Ag nanowire electrode for display and catalysis applications**

Canlier A., UCAK U. V., USTA H., CHO C., LEE J., Sen U., Citir M.

APPLIED SURFACE SCIENCE, vol.350, pp.79-86, 2015 (Journal Indexed in SCI)

● **Micro-/Nanostructured Highly Crystalline Organic Semiconductor Films for Surface-Enhanced Raman Spectroscopy Applications**

Yilmaz M., OZDEMİR M., Erdogan H., Tamer U., SEN U., Facchetti A., USTA H., Demirel G.

ADVANCED FUNCTIONAL MATERIALS, vol.25, pp.5669-5676, 2015 (Journal Indexed in SCI)

● **Photophysical properties of self-assembled supramolecular peptide nanofiber organic semiconductors**

Khalily M. A., USTA H., GÜLER M. Ö.

ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY, vol.250, 2015 (Journal Indexed in SCI)

● **Novel photothermal-based release mechanism for controlled release on Au nanoparticles through**

light

Goren E., ÇAVUŞOĞLU H., Yavuz E., USTA H., YAVUZ M. S.

ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY, vol.250, 2015 (Journal Indexed in SCI)

● **Photosensing Properties of Pentacene OFETs Based on a Novel PMMA Copolymer Gate Dielectric**

Loffredo F., Grimaldi I. A., Miscioscia R., Nenna G., Villani F., Minarini C., Petrosino M., Rubino A., Usta H., Facchetti A.

● JOURNAL OF DISPLAY TECHNOLOGY, vol.11, pp.533-540, 2015 (Journal Indexed in SCI)

● **Symmetric naphthalenediimidequaterthiophenes for electropolymerized electrochromic thin films**

FIGA V., CHIAPPARA C., FERRANTE F., CASALETTO M. P., PRINCIPATO F., CATALDO S., CHEN Z., USTA H., FACCHETTI A., PIGNATARO B.

● JOURNAL OF MATERIALS CHEMISTRY C, vol.3, pp.5985-5994, 2015 (Journal Indexed in SCI)

● **Enhancement of Anhydrous Proton Conductivity of Poly(vinylphosphonic acid)-Poly(2,5-benzimidazole) Membranes via In Situ Polymerization**

Sen U., USTA H., Acar O., Citir M., Canlier A., Bozkurt A., Ata A.

● MACROMOLECULAR CHEMISTRY AND PHYSICS, vol.216, pp.106-112, 2015 (Journal Indexed in SCI)

● **Selective Remanent Ambipolar Charge Transport in Polymeric Field-Effect Transistors For High-Performance Logic Circuits Fabricated in Ambient**

Fabiano S., Usta H., Forchheimer R., Crispin X., Facchetti A., Berggren M.

● ADVANCED MATERIALS, vol.26, pp.7438-7443, 2014 (Journal Indexed in SCI)

● **Perfluoroalkyl-Functionalized Thiazole Thiophene Oligomers as N-Channel Semiconductors in Organic Field-Effect and Light-Emitting Transistors**

USTA H., Sheets W. C., Denti M., Generali G., Capelli R., Lu S., Yu X., Muccini M., Facchetti A.

● CHEMISTRY OF MATERIALS, vol.26, pp.6542-6556, 2014 (Journal Indexed in SCI)

● **BODIPY-Thiophene Copolymers as p-Channel Semiconductors for Organic Thin-Film Transistors**

Usta H., Yilmaz M. D., Avestro A., Boudinet D., Denti M., Zhao W., Stoddart J. F., Facchetti A.

● ADVANCED MATERIALS, vol.25, pp.4327-4334, 2013 (Journal Indexed in SCI)

● **Size-controlled conformal nanofabrication of biotemplated three-dimensional TiO₂ and ZnO nanonetworks**

Ceylan H., Ozgit-Akgun C., Erkal T. S., Donmez I., Garifullin R., Tekinay A. B., Usta H., Biyikli N., Guler M. O.

● SCIENTIFIC REPORTS, vol.3, 2013 (Journal Indexed in SCI)

● **3,6-Dithiophen-2-yl-diketopyrrolo[3,2-b]pyrrole (isoDPPT) as an Acceptor Building Block for Organic Opto-Electronics**

Lu S., Drees M., Yao Y., Boudinet D., Yan H., Pan H., Wang J., Li Y., Usta H., Facchetti A.

● MACROMOLECULES, vol.46, pp.3895-3906, 2013 (Journal Indexed in SCI)

● **Dialkoxybithiazole: A New Building Block for Head-to-Head Polymer Semiconductors**

Guo X., Quinn J., Chen Z., Usta H., Zheng Y., Xia Y., Hennek J. W., Ortiz R. P., Marks T. J., Facchetti A.

● JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, vol.135, pp.1986-1996, 2013 (Journal Indexed in SCI)

● **Dithienocoronediimide-Based Copolymers as Novel Ambipolar Semiconductors for Organic Thin-Film Transistors**

Usta H., Newman C., Chen Z., Facchetti A.

● ADVANCED MATERIALS, vol.24, pp.3678-3684, 2012 (Journal Indexed in SCI)

● **Combining Electron-Neutral Building Blocks with Intramolecular "Conformational Locks" Affords Stable, High-Mobility P- and N-Channel Polymer Semiconductors**

Huang H., Chen Z., Ponce Ortiz R., Newman C., Usta H., Lou S., Youn J., Noh Y., Baeg K., Chen L. X., et al.

● JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, vol.134, pp.10966-10973, 2012 (Journal Indexed in SCI)

● **Anthracenedicarboximide-based semiconductors for air-stable, n-channel organic thin-film transistors: materials design, synthesis, and structural characterization**

Usta H., Kim C., Wang Z., Lu S., Huang H., Facchetti A., Marks T. J.

● JOURNAL OF MATERIALS CHEMISTRY, vol.22, pp.4459-4472, 2012 (Journal Indexed in SCI)

● **Solution-Deposited Organic-Inorganic Hybrid Multilayer Gate Dielectrics. Design, Synthesis, Microstructures, and Electrical Properties with Thin-Film Transistors**

Ha Y., Emery J. D., Bedzyk M. J., Usta H., Facchetti A., Marks T. J.

JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, vol.133, pp.10239-10250, 2011 (Journal Indexed in SCI)

n-Channel Semiconductor Materials Design for Organic Complementary Circuits

Usta H., Facchetti A., Marks T. J.

ACCOUNTS OF CHEMICAL RESEARCH, vol.44, pp.501-510, 2011 (Journal Indexed in SCI)

Organic light-emitting transistors with an efficiency that outperforms the equivalent light-emitting diodes

Capelli R., Toffanin S., Generali G., Usta H., Facchetti A., Muccini M.

NATURE MATERIALS, vol.9, pp.496-503, 2010 (Journal Indexed in SCI)

Design, Synthesis, and Characterization of Ladder-Type Molecules and Polymers. Air-Stable, Solution-Processable n-Channel and Ambipolar Semiconductors for Thin-Film Transistors via Experiment and Theory

Usta H., Risko C., Wang Z., Huang H., Deliomeroglu M. K., Zhukhovitskiy A., Facchetti A., Marks T. J.

JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, vol.131, pp.5586-5608, 2009 (Journal Indexed in SCI)

Air-stable, solution-processable n-channel and ambipolar semiconductors for thin-film transistors based on the indenofluorenebis(dicyanovinylene) core

Usta H., Facchetti A., Marks T. J.

JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, vol.130, pp.8580-8582, 2008 (Journal Indexed in SCI)

Synthesis, characterization, and transistor response of semiconducting silole polymers with substantial hole mobility and air stability. Experiment and theory

Lu G., Usta H., Risko C., Wang L., Facchetti A., Ratner M. A., Marks T. J.

JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, vol.130, pp.7670-7685, 2008 (Journal Indexed in SCI)

Synthesis and characterization of electron-deficient and highly soluble (Bis)Indenofluorene building blocks for n-type semiconducting polymers

Usta H., Facchetti A., Marks T. J.

ORGANIC LETTERS, vol.10, pp.1385-1388, 2008 (Journal Indexed in SCI)

Dithienosilole- and dibenzosilole-thiophene copolymers as semiconductors for organic thin-film transistors

Usta H., Lu G., Facchetti A., Marks T. J.

JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, vol.128, pp.9034-9035, 2006 (Journal Indexed in SCI)

Books & Book Chapters

Polymeric and Small-Molecule Semiconductors for Organic Field-Effect Transistors

USTA H., Facchetti A.

in: Large Area and Flexible Electronics, Mario Caironi, Yong-Young Noh, Editor, Wiley-VCH Verlag Weinheim GmbH, Weinheim, pp.1-100, 2015

Refereed Congress / Symposium Publications in Proceedings

Polymeric semiconductors based on meso-substituted BODIPY for (opto)electronic applications

USTA H., Kim C., Kim B.

257th National Meeting of the American-Chemical-Society (ACS), Florida, United States Of America, 31 March - 04 April 2019, vol.257

Organic semiconductor based surface-enhanced Raman spectroscopy platforms

DEMIREL 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

Novel Molecular Microribbons for Organic Field-Effect Transistors

Usta H., Özdemir M.

2nd International Conference on Material Science and Technology, Nevşehir, Turkey, 11 - 13 October 2017, pp.536

A New Solution-Processable Molecules for Semiconducting Microfibers in Organic Thin-Film Transistors

Usta H., Özdemir M.

International Congress on chemistry and materials science, Ankara, Turkey, 5 - 07 October 2017, no.87, pp.126

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

Interface Engineering in Organic Thin Film Transistors

Liguori R., Fusco S., Rubino A., Usta H., Facchetti A.

40th International Semiconductor Conference (CAS), Sinaia, Romania, 11 - 14 October 2017, pp.143-146

Kinetic Study on Catalytic Degradation of Organic Dyes with Copper Nanowire Catalyst

TAHAOĞLU D., USTA H., ŞEN Ü., ÇITIR M.

2nd International Nanoscience and Nanotechnology for Next Generation Conference (NaNoNG) 2015, Antalya, Turkey, 29 - 31 October 2015, pp.15-16

Proton Conducting MOF-Polymer Composites

ERKARTAL M., Aslan A., USTA H., ÇITIR M., ŞEN Ü.

International Porous Powder Materials (PPM) 2015, İzmir, Turkey, 15 - 18 September 2015, pp.28

High Proton Conductive PVA/PAMPS/Triazole Composite Membranes for PEMFC

ERKARTAL M., DADI Ş., USTA H., ÇITIR M., ŞEN Ü.

International Symposium on Materials for Energy Storage and Conversion, Ankara, Turkey, 7 - 09 September 2015, pp.34

Development of Novel Boron-Based Polymer Semiconductors for Organic Thin-Film Transistors

USTA H., Özdemir M., ÇITIR M., ŞEN Ü.

International Semiconductor Science and Technology Conference 2015, Aydın, Turkey, 11 - 13 May 2015, pp.19

High-performance organic materials development for optoelectronic applications

USTA H., Facchetti A., ÇITIR M., ŞEN Ü.

1st International Conference on Organic Electronic Material Technologies (OEMT'2015), Elazığ, Turkey, 25 - 28 March 2015, pp.11

Experimental Methods for Thin Layer Coating of Metal Nanowires with Inert Metals

ÇITIR M., CANLIER A., ŞEN Ü., USTA H.

6th NANOCON International Conference, Brno, Czech Republic, 5 - 07 November 2014, pp.1

THIN FILMS OF INERT METAL NANOWIRES FOR DISPLAY APPLICATIONS

Çitir M., Sen U., Usta H., Canlier A.

6th NANOCON International Conference, Brno, Czech Republic, 5 - 07 November 2014, pp.64-76

Electrodeposition of novel poly (naphthalenediimide-quaterthiophene) thin films and applications in plastic optoelectronics devices

USTA H.

Transparent Optical Networks (ICTON), 2013 15th International Conference on, Cartegana, Spain, 3 - 06 June 2013, vol.1, pp.1

Supported Projects

USTA H., TUBITAK Project, Aviyonik Uygulamalar için OLED Geliştirilmesi, 2014 - Continues

ÇITIR M., USTA H., CANLIER A., TUBITAK Project, Bor İçeren, Yüksek Performanslı Organik Yarı-İletken Malzemeler Geliştirilmesi Ve İnce Film Transistor (Otf) Uygulamaları, 2014 - Continues

USTA H., Project Supported by Other Official Institutions, Optoelektronik Teknolojisi için Fonksiyonel Organik Malzemeler

Geliştirilmesi, 2014 - Continues

USTA H., TUBITAK Project, Organik Güneş Pili (OPV) ve İnce Film Transistörler (OTFT) için Yüksek Performanslı Yarı-İletken Polimer Geliştirilmesi, 2013 - Continues

USTA H., Deneme İ., Project Supported by Higher Education Institutions, Tiyazol Temelli Donör-Akseptör Yapısında Özgün Yarı-İletkenlerin Geliştirilmesi, 2018 - 2019

USTA H., Özdemir M., Project Supported by Higher Education Institutions, Organik Alan-Etkili Transistör (OFET) Uygulamaları için Benzo[1,2-c:4,5-b']diazepin (BTBT) Temelli Yarı-İletken Avize Polimer Geliştirilmesi, 2017 - 2019

USTA H., DANA A., Project Supported by Higher Education Institutions, Optoelektronik Uygulamalar için Çözümlenmiş Edilebilir Kararlı Ntipi Moleküler Yarıiletken Malzemeler Geliştirilmesi, 2015 - 2018

MUTLUGÜN E., USTA H., ŞEN Ü., Project Supported by Higher Education Institutions, Malzeme Bilimi ve Nanoteknoloji Araştırma Laboratuvarı Kurulumu, 2016 - 2017

USTA H., ÖZDEMİR R., Project Supported by Higher Education Institutions, Organik İnce-Film Transistör OTFT Uygulamaları için İndenoflorendiketon Temelli Moleküler Yarı-İletken Geliştirilmesi, 2016 - 2017

Memberships / Tasks in Scientific Organizations

Member, 2006 - Continues

Member, 2005 - Continues

Member, 2004 - Continues

Scientific Refereeing

Journal of Materials Chemistry A, SCI Journal, October 2014

Polymers , SCI Journal, September 2014

New Journal of Chemistry, SCI Journal, September 2014

Dyes and Pigments (Elsevier), SCI Journal, September 2014

TUBITAK Project, September 2014

Journal of Materials Chemistry A, SCI Journal, August 2014

TUBITAK Project, August 2014

Journal of Materials Chemistry A, SCI Journal, July 2014

TUBITAK Project, July 2014

Journal of Materials Chemistry C, SCI Journal, June 2014

RSC Advances, SCI Journal, June 2014

RSC Advances, SCI Journal, May 2014

Energy and Environmental Science, SCI Journal, April 2014

New Journal of Chemistry, SCI Journal, March 2014

Chemical Communications, SCI Journal, March 2014

TUBITAK Project, March 2014

Journal of Materials Chemistry A, SCI Journal, February 2014

Journal of Materials Chemistry C, SCI Journal, January 2014

TUBITAK Project, December 2013

Invited Congress and Symposium Activities

International NanoNG-2014 (Nanoscience and Nanotechnology for Next Generation) Conference, Attendee, Elazığ, Turkey, 2014

International Workshop on Flexible Bio- and Organic Printed Electronics, Attendee, Konya, Turkey, 2014

15th International Conference on Transparent Optical Networks (ICTON), Attendee, Cartagena, Spain, 2013

7th COPE-SOLVAY Symposium on Organic Electronics, Attendee, Bordeaux, France, 2013
SPIE Optics and Photonics, Organic Photovoltaics XIII, Attendee, San Diego, CA, United States Of America, 2012
Active-Matrix Flatpanel Displays and Devices (AM-FPD), Attendee, Kyoto, Japan, 2012
Materials Research Society (MRS) Fall Meeting, Attendee, Boston, MA, United States Of America, 2010
International Institute for Nanosymposium, Attendee, Evanston, IL, United States Of America, 2010
Gordon Research Conferences, Attendee, South Hadley, MA, United States Of America, 2008
Materials Research Society (MRS) Spring Meeting, Attendee, March 2008, San Francisco, CA, United States Of America, 2008
Northwestern University Fall BIP Lectures, Attendee, Northwestern University, Evanston, IL, United States Of America, 2007
233rd American Chemical Society (ACS) Meeting, Attendee, Chicago, IL, United States Of America, 2007
Industrial Associates Meeting, Attendee, Evanston, IL, United States Of America, 2007
38th Central Regional Meeting of the American Chemical Society (ACS), Attendee, Frankenmuth, MI, Turkey, 2006
NSF-Research Experience for Undergraduates Final Seminar, Attendee, Texas A&M University, College Station, TX, United States Of America, 2002

Citations

Total Citations (WOS):3456

h-index (WOS):26

Scholarships

TÜBİTAK-Bideb 2232-Yurda Dönüş Araştırma Bursu, 2013, TÜBİTAK, 2013 - Continues

Conference Travel Grant, 2007-2008, University, 2007 - Continues

Graduate School Full Scholarship (Stipend + Tuition), University, 2004 - Continues

NSF-REU Scholarship, 2002, University, 2002 - Continues

Distinguished Scholarship for Undergraduate Education, 2000 - 2004, TÜBİTAK, 2000 - Continues

Full (Tuition+Housing+Stipend) Undergraduate Scholarship, 2000 - 2004, University, 2000 - Continues

Awards

USTA H., Üstün Başarılı Genç Bilim İnsanı Ödülü (GEBİP-2015), Türkiye Bilimler Akademisi (TÜBA), May 2015

USTA H., Üstün Başarılı Genç Bilim Adamı Ödülü (BAGEP-2014), Bilim Akademisi, March 2014

USTA H., Flexi R&D Award, FlexTech Alliance, USA, 2011, FlexTech Alliance, USA, January 2011

USTA H., US National Institute of Standards and Technology (NIST) Innovation Award, USA, 2010, US National Institute of Standards and Technology (NIST), May 2010

USTA H., IDTechEx Printed Electronics Europe Award, Germany, 2010, IDTechEx, March 2010

USTA H., Allen S. Hussey Award, 2006, Northwestern University, Chemistry Department, October 2006

USTA H., Bölüm Birinciliği (Mezuniyet), Bilkent Üniversitesi, June 2004