

## Res. Asst. METE BATUHAN DURUKAN

### Personal Information

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### International Researcher IDs

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Publons / Web Of Science ResearcherID: AAT-6630-2020

ScopusID: 57189519130

Yoksis Researcher ID: 236740

### Education Information

Postgraduate, Middle East Technical University, Graduate School of Natural and Applied Sciences, Metalurji Ve Malzeme Mühendisliği (YI) (Tezli), Turkey 2015 - Continues

Undergraduate, Middle East Technical University, Faculty of Engineering, Department of Metallurgical and Materials Engineering, Turkey 2009 - 2015

### Dissertations

Postgraduate, CARBON NANOTUBE- COBALT OXIDE NANOCOMPOSITES FOR HIGH PERFORMANCE SUPERCAPACITORS, Middle East Technical University, Graduate School of Natural and Applied Sciences, 2017

### Research Areas

Material science and engineering, Semiconductor and Superconductor Materials, Chemical and Electrochemical Properties, Corrosion and Corrosion Protection, Composites, Polymeric Materials, Nanomaterials

### Academic Titles / Tasks

Research Assistant, Middle East Technical University, Faculty of Engineering, Department of Metallurgical and Materials Engineering, 2015 - Continues

### Published journal articles indexed by SCI, SSCI, and AHCI

#### I. Self-Charging Dual-Modal Sensor for Glucose Monitoring Based on Piezoelectric Nanowire/Microgel Hybrid Film

Kim H., Nam S., DURUKAN M. B., ÜNALAN H. E., Lee H. J.

ADVANCED FUNCTIONAL MATERIALS, vol.34, no.7, 2024 (SCI-Expanded)

#### II. An Edible Supercapacitor Based on Zwitterionic Soy Sauce-Based Gel Electrolyte

DURUKAN M. B., Keskin D., TUFAN Y., Dincer O., ÇİÇEK M. Ö., YILDIZ B., ÇINAR AYGÜN S., ERCAN B., ÜNALAN H. E.

- III. **Synthesis of heterostructured nanocomposites as supercapacitor electrodes and investigation of their electrochemical properties**  
Aytürk S. E. Y., ÇITAK A., Aydin E. C., DURUKAN M. B.  
*Electrochimica Acta*, vol.472, 2023 (SCI-Expanded)
- IV. **Cobalt-doped MoO<sub>3</sub> thin films and dual-band electrochromic devices with excellent cyclic stability**  
Tutel Y., Durukan M. B., Hacioglu S. O., Baskose U. C., Toppore L. K., Unalan H. E.  
*Applied Materials Today*, vol.35, 2023 (SCI-Expanded)
- V. **A glucose-responsive microgel-based soft etalon as an epidermal glucose colorimetric sensor**  
Nam S., Kim H., Lee S., DURUKAN M. B., ÜNALAN H. E., Lee H. J.  
*Sensors and Actuators B: Chemical*, vol.396, 2023 (SCI-Expanded)
- VI. **3D printing of hexagonal boron nitride nanosheets/polylactic acid nanocomposites for thermal management of electronic devices**  
Gorur M. C., Doganay D., Durukan M. B., Cicek M. O., Kalay Y. E., Kincal C., Solak N., Ünalan H. E.  
*COMPOSITES PART B-ENGINEERING*, vol.265, 2023 (SCI-Expanded)
- VII. **Ultra-Sensitive Bio-Polymer Iontronic Sensors for Object Recognition from Tactile Feedback**  
Çiçek M. Ö., Durukan M. B., Yıldız B., Keskin D., Doğanay D., Çınar Aygün S., Çakır M. P., Ünalan H. E.  
*Advanced Materials Technologies*, vol.8, no.16, 2023 (SCI-Expanded)
- VIII. **Double-decker lutetium and europium phthalocyanine composites with reduced graphene oxide as supercapacitor electrode materials**  
YABAŞ E., Biçer E., DURUKAN M. B., Keskin D., ÜNALAN H. E.  
*Journal of Organometallic Chemistry*, vol.980-981, 2022 (SCI-Expanded)
- IX. **Multifunctional and Physically Transient Supercapacitors, Triboelectric Nanogenerators, and Capacitive Sensors**  
Durukan M. B., Çiçek M. Ö., Doğanay D., Gorur M. C., Cinar S., Ünalan H. E.  
*ADVANCED FUNCTIONAL MATERIALS*, vol.32, no.1, 2022 (SCI-Expanded)
- X. **Fabric based wearable triboelectric nanogenerators for human machine interface**  
DOĞANAY D., ÇİÇEK M. Ö., DURUKAN M. B., Altuntas B., Agbahca E., COŞKUN Ş., ÜNALAN H. E.  
*NANO ENERGY*, vol.89, 2021 (SCI-Expanded)
- XI. **Multichromic Vanadium Pentoxide Thin Films Through Ultrasonic Spray Deposition**  
TUTEL Y., DURUKAN M. B., Koc S., KOYLAN S., Cakmak H., Kocak Y., Hekmat F., Ozensoy E., Ozbay E., UDUM Y., et al.  
*JOURNAL OF THE ELECTROCHEMICAL SOCIETY*, vol.168, no.10, 2021 (SCI-Expanded)
- XII. **Highly stable silver-platinum core-shell nanowires for H<sub>2</sub>O<sub>2</sub> detection**  
Koylan S., Tunca S., Polat G., Durukan M. B., Kim D., Kalay Y. E., Ko S. H., Ünalan H. E.  
*NANOSCALE*, vol.13, no.30, pp.13129-13141, 2021 (SCI-Expanded)
- XIII. **Seamless Monolithic Design for Foam Based, Flexible, Parallel Plate Capacitive Sensors**  
ÇİÇEK M. Ö., DOĞANAY D., DURUKAN M. B., Gorur M. C., ÜNALAN H. E.  
*Advanced Materials Technologies*, vol.6, no.6, 2021 (SCI-Expanded)
- XIV. **Cobalt Oxide Nanoflakes on Single Walled Carbon Nanotube Thin Films for Supercapacitor Electrodes**  
DURUKAN M. B., Yuksel R., ÜNALAN H. E.  
*ELECTROCHIMICA ACTA*, vol.222, pp.1475-1482, 2016 (SCI-Expanded)
- XV. **Flexible supercapacitor electrodes with vertically aligned carbon nanotubes grown on aluminum foils**  
Dogru I. B., DURUKAN M. B., Turel O., ÜNALAN H. E.  
*PROGRESS IN NATURAL SCIENCE-MATERIALS INTERNATIONAL*, vol.26, no.3, pp.232-236, 2016 (SCI-Expanded)

## Refereed Congress / Symposium Publications in Proceedings

- I. **Laser Ablated Single Walled Carbon Nanotube Films as Microsupercapacitors**

- DURUKAN M. B., çınar k., BEK A., ÜNALAN H. E.  
19th International Metallurgy and Materials Congress, 25 - 27 October 2018
- II. **Microcapacitors from Laser Ablated Multi Walled Carbon Nanotube Films**  
DURUKAN M. B., kadir c., BEK A., ÜNALAN H. E.  
MRS Fall Meeting 2017, 26 November 2017
- III. **Single Walled Carbon Nanotube Thin Films Decorated with Cobalt Oxide Nanoflakes for Supercapacitor Electrodes**  
DURUKAN M. B., YÜKSEL R., ÜNALAN H. E.  
MESCI-S 2017 (2nd International Symposium on Materials for Energy Storage and Conversion), Turkey, 26 September 2017
- IV. **Single Walled Carbon Nanotube Thin Films Decorated with Cobalt Oxide Nanoflakes for Supercapacitor Electrode**  
DURUKAN M. B., YÜKSEL R., ÜNALAN H. E.  
mESC-IS 2017 2nd International Symposium on Materials for Energy Storage and Conversion, 26 - 28 September 2017
- V. **Single Walled Carbon Nanotube Cobalt Oxide Nanocomposites as Supercapacitor Electrode Materials**  
DURUKAN M. B., YÜKSEL R., ÜNALAN H. E.  
MRS Fall Meeting' 2015, 29 November - 04 December 2015

## Supported Projects

ÜNALAN H. E., DURUKAN M. B., Project Supported by Higher Education Institutions, MOLİBDEN DİSÜLFÜR (MoS<sub>2</sub>)/GRAFEN NANOKOMPOZİTLERİNİN ÜRETİMİ VE SÜPERKAPASİTÖRLERDE KULLANIMI, 2018 - 2019  
ÜNALAN H. E., ÖZKUL S., DURUKAN M. B., Project Supported by Higher Education Institutions, KAPASİTİF DEİYONİZASYON PROSESİNİN İYON GİDERME VERİMİNİ ARTTIRMAK AMACI İLE METAL OKSİTLER KULLANILARAK KAPASİTÖRLERİN GELİŞTİRİLMESİ, 2017 - 2017  
ÜNALAN H. E., TUBITAK Project, Karbon Nanotüplerle Süperkapasitörlerin Geliştirilmesi, 2014 - 2017

## Metrics

Publication: 40  
Citation (WoS): 144  
Citation (Scopus): 185  
H-Index (WoS): 6  
H-Index (Scopus): 7