DENİZ KESKİN

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EDUCATION

University of California Irvine, CA, USA **2023-ongoing**
Ph.D., Engineering, Materials and Manufacturing Technology

Middle East Technical University, Ankara, Türkiye **2021-2023**
Master of Science, Metallurgical and Materials Engineering
Cumulative GPA: 3.71/4.00
Thesis Topic: Multi-functional Zwitterionic Hydrogel Electrolytes for Supercapacitor Applications

Middle East Technical University, Ankara, Türkiye **2016-2021**
Bachelor of Science, Chemistry
Cumulative GPA: 3.05/4.00

Ankara Atatürk Highschool, Ankara, Türkiye **2010-2015**

EXPERIENCE

Middle East Technical University March 2021 - Present
Research Assistant
Nanolab, Prof. Dr. H. Emrah Ünalan *Ankara, Türkiye*

· Detailed electrochemical analysis and sample preparation
· Design of sustainable zwitterionic hydrogel/gel electrolytes with self-healing, anti-freezing and anti-drying abilities by using green chemistry
· Design of flexible electrodes for supercapacitor and sensor applications
· Reduction of graphene oxide
· Synthesis of TMDs (1T-MoS_2, 1T-TiS_2) by organolithium chemistry
· Synthesis of graphene by shear exfoliation
· Fabrication of micro-supercapacitors by using laser ablation
· Ultrasonic deposition technique

Turkish Petroleum Corporation August 2020 – September 2020
Intern *Ankara, Türkiye*

· Being familiar with useful lab techniques including gas chromatography, gas chromatography mass spectrometry, stable isotope analyses
· Making a series of analyses of the samples that are famous for being one of the greatest discoveries of recent years in terms of the energy sector in Türkiye

ACADEMIC INTERESTS

· Energy storage · Supercapacitors · Nanotechnology · Edible electronics · Green chemistry

HONORS, AWARDS AND MAJOR ACHIEVEMENTS

Finalist of NanoArthography Science Images Competition November 2022

· NanoArtography was created and is organized by Prof. Babak Anasori at the A. J. Drexel Nanomaterials Institute and Purdue School of Engineering and Technology at IUPUI

Participation to Best Poster Award Competition at e-MRS September 2022

· Best Poster Award Competition was organized by European Materials Research Society (e-MRS) and held in Warsaw University of Technology, Poland

Honor Student, 2 times 2016 - 2021

· Award for successful academic performance in the Department of Chemistry, Middle East Technical University

Ranked in top 2% (in 2.2 million students) in the Turkish National University Enterance Exam 2016

ACADEMIC PUBLICATIONS

An Edible Supercapacitor Based on Zwitterionic Soy Sauce-Based Gel Electrolyte
Advanced Functional Materials (First Author), 2023

Ultra-sensitive Bio-Polymer Iontronic Sensors for Object Recognition from Tactile Feedback
Advanced Energy Materials, 2023

Double-decker Lutetium and Europium Phthalocyanine Composites with Reduced Graphene Oxide as Supercapacitor Electrode Materials
Journal of Organometallic Chemistry, 2022

POSTER PRESENTATIONS

Biodegradable and Biocompatible Gel Electrolyte for Edible Supercapacitors
Poster Presentation at e-MRS 2022 Fall Meeting (Warsaw, Poland)

Ultrasonic Spray Deposition of 1T-MoS_2 for In-Plane Micro-supercapacitors
Poster Presentation at e-MRS 2022 Fall Meeting (Warsaw, Poland), MRS 2022 Meeting (Boston, USA)

Direct Ink Writing of 1T-MoS_2/AG NW Inks For The Fabrication of Interdigidated Microsupercapacitors
Poster Presentation at e-MRS 2022 Fall Meeting (Warsaw, Poland)

Ultra-sensitive Bio-Polymer Iontronic Sensors for Object Recognition from Tactile Feedback
Poster Presentation at e-MRS 2022 Fall Meeting (Warsaw, Poland), MRS 2022 Meeting (Boston, USA)

PROFESSIONAL PROJECTS

The Scientific and Technological Research Council of Turkey (Tübitak) Project
Project Title: Micro-supercapacitors Production From Reduced Graphene Oxide (rGO) and MoS_2 Nanocomposites with Multiple Approaches and Capacitive Deionization (CDI) Performance Evaulation

· Synthesizing and characterizing GO and 1T-MoS_2
· Fabricating rGO/1T-MoS_2 nanocomposite electrodes by using ultrasonic deposition technique (SONOTEK) and characterizing their electrochemical properties
· Fabricating micro-supercapacitor and characterizing CDI performance of the device

The Scientific and Technological Research Council of Turkey (Tübitak) Project
Project Title: Micro-supercapacitor Production with Direct Ink Writer (DIW) by using 1T Molybdenum Disulfide-Silver Nanowire Ink

· Synthesizing 2D MoS_2 by exfoliation and obtaining electrically conductive MoS_2 with the phase change from 2H to 1T
· Formulating ink by adding silver nanowire and optimizing its rheological properties to make ink printable

SOFTWARE SKILLS

· Autodesk Inventor · OriginLab · Rhinoceros 3D · MATLAB · Avogadro · Chemcompute · Chemdraw · CasaXPS

VOLUNTARY WORK

ESN METU-Erasmus Student Network METU June 2017-June 2018

· Being a host student to welcome and help exchange students while preparing events and projects in an international environment

METU Chemistry Community October 2016-June 2018

· Ensuring financially lacking schools getting quality education by providing books and equipment

LANGUAGES

Turkish	Native
English	Professional
German	Beginner(A2)