### **Academic Staff**

Photovoltaic Cells and Applications

Prof. Dr. Savaş SÖNMEZOĞLU

#### **Production Metallurgy**

Prof. Dr. Aydın RÜŞEN Dr. Öğr. Üyesi Mehmet Ali TOPÇU

Production and Applications of Nanomaterials

Doç. Dr. Adem SARILMAZ

Production and Applications of Optical Materials Prof. Dr. Sabriye AÇIKGOZ Arş. Gör. Dr. Hasan YÜNGEVİŞ

**Ceramic and Phosphorescent Materials** 

Prof. Dr. Esra ÖZTÜRK Dr. Öğr. Üyesi Erkul KARACAOĞLU

**Polymers and Composite Materials** 

Dr. Öğr. Üyesi Yelda MEYVA ZEYBEK

Prof. Dr. Savaş Sönmezoğlu is among the top
2% of the world's most influential scientists,
according to the list prepared by Stanford
University.



Karamanoğlu Mehmetbey Üniversitesi Mühendislik Fakültesi Metalurji ve Malzeme Mühendisliği Bölümü 70100 Yunus Emre Yerleskesi Merkez / Karaman Our department was established in 2011 as the Department of Materials Science and Engineering, and its name was changed at the beginning of 2016.

Since the 2024-2025 academic year, our department has been offering master's and doctoral programs.

## **Our Facilities**

#### **Photovoltaic Cells Laboratory**

Innovative studies are being conducted in the field of Perovskite and Dye-Sensitized Solar Cells.

#### Materials Synthesis and Characterization Laboratory

Studies are conducted on various synthesis methods and the investigation of photoluminescence properties of materials such as ceramics, glass, and other types of materials.

#### Laser Microscopy and Nano-Optics Laboratory

The laboratory actively conducts research on the fabrication of nanostructured semiconductor surfaces and their optical characterization.

### **Production Metallurgy Laboratory**

Research studies are being conducted on the recovery of such waste, which contains a significant amount of metal, through hydrometallurgical and/or pyrometallurgical methods.

### Nano-Technology R&D Laboratory

The production, as well as structural, morphological, and electrical characterization of organic, inorganic, and biologically based nanomaterials used in advanced technology research, are being conducted.

#### Energy Materials Production and Atomic Design Laboratory

Within the laboratory, semiconductor-conductor nanomaterials with different atomic designs are produced for hydrogen, solar, light-emitting diode, battery, and photodynamic-phototherapy technologies.













# KARAMANOĞLU MEHMETBEY UNIVERSITY

## DEPARTMENT OF METALLURGY AND MATERIALS ENGINEERING



2025

Our Mission.

Our mission is to educate engineers who are aware of the ethical principles of their profession, capable of effective communication. adaptable to teamwork. continuously updating closelv following themselves bv developments, technological proficient in occupational safety, able to solve problems using modern design and engineering tools, capable of transforming theoretical knowledge into practice, and possessing an self-confident entrepreneurial and mindset.

#### Our Vision.

Our vision is to be a department that closelv follows scientific and technological advancements, designs, develops, and produces engineering materials-ranging from nano to scales-based metal. macro on ceramic, polymer, and composite materials derived from natural or synthetic inorganic and organic raw materials. We aim to adapt these materials' acquired properties to meet technical needs the of various industrial sectors, conduct original <u>scientific</u> research, generate new knowledge, and contribute to the benefit of humanity.

Fields of Study

Iron & Steel and Casting Aerospace Automotive **Ceramics & Glass Polymers** Energy **Defense Industry Flectronics** Telecommunications Welding & Non-Destructive Testing **Biotechnology** 





Our department has numerous completed and ongoing projects supported by national organizations (TÜBİTAK, DPT, BAP, etc.) and international institutions (EU).

A Glimpse into Our Department



Atmosphere-Controlled High-Temperature Furnace



Photoluminescence Spectrometer



**Electrospinning equipment** 





**Quantum Efficiency** Measurement System



**Optical Table**