

## Assoc. Prof. MURAT IŞIK

### Personal Information

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### International Researcher IDs

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Publons / Web Of Science ResearcherID: GQP-1784-2022

ScopusID: 57439755400

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### Education Information

Doctorate, Tohoku University, Department of Engineering, Metallurgy, Materials Science and Processing, Japan 2013 - 2016

### Research Areas

Mechanical Engineering, Material science and engineering, Production Metallurgy

### Academic and Administrative Experience

Deputy Head of Department, Bursa Uludağ University, 2023 - 2026

Head of Department, Bursa Uludağ University, MÜHENDİSLİK FAKÜLTESİ, OTOMOTİV MÜHENDİSLİĞİ, 2022 - 2025

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

- I. **Crack elimination of laser powder directed energy deposition Inconel 738LC using in-situ addition of Inconel 718: A comprehensive study on the mechanical and corrosion resistivity properties**  
Işık M.  
JOURNAL OF ALLOYS AND COMPOUNDS, vol.175805, pp.1-35, 2024 (SCI-Expanded)
- II. **The effect of additively and subtractively created center internal features on microstructure and mechanical performance of inconel-718 parts**  
Işık M.  
RAPID PROTOTYPING JOURNAL, vol.30, no.2, pp.287-304, 2024 (SCI-Expanded)
- III. **Fabrication of Electron Beam Melted Titanium Aluminide: The Effects of Machining Parameters and Heat Treatment on Surface Roughness and Hardness**  
Işık M.  
METALS, vol.13, no.12, pp.1952-1969, 2023 (SCI-Expanded)
- IV. **Investigation of the Influence of High-Pressure Torsion and Solution Treatment on Corrosion and Tribocorrosion Behavior of CoCrMo Alloys for Biomedical Applications**  
Işık M.  
CRYSTALS, vol.13, no.4, pp.590-604, 2023 (SCI-Expanded)
- V. **Additive manufacturing and characterization of a stainless steel and a nickel alloy**

- Isik M.  
MATERIALPRUEFUNG/MATERIALS TESTING, vol.65, no.3, pp.378-388, 2023 (SCI-Expanded)
- VI. **A thermal finite element model with efficient computation of surface heat fluxes for directed-energy deposition process and application to laser metal deposition of IN718**  
Dortkasli K., Isik M., Demir E.  
Journal of Manufacturing Processes, vol.79, pp.369-382, 2022 (SCI-Expanded)
- VII. **High-speed machining of additively manufactured Inconel 718 using hybrid cryogenic cooling methods**  
Bagherzadeh A., Koc B., Budak E., Isik M.  
VIRTUAL AND PHYSICAL PROTOTYPING, vol.17, no.3, pp.419-436, 2022 (SCI-Expanded)
- VIII. **A numerical methodology for monitoring stress distributions and experimental proof of the concept on metal embedded thin polymer-matrix composites using X-ray Diffraction**  
Demir E., Sas H. S., Isik M., Gungor E. A., Davut K.  
THIN-WALLED STRUCTURES, vol.173, 2022 (SCI-Expanded)
- IX. **Alumina and tricalcium phosphate added CoCr alloy for load-bearing implants**  
Isik M., Avila J. D., Bandyopadhyay A.  
ADDITIVE MANUFACTURING, vol.36, 2020 (SCI-Expanded)
- X. **Titanium-Silicon on CoCr Alloy for Load-Bearing Implants Using Directed Energy Deposition-Based Additive Manufacturing**  
Avila J. D., Isik M., Bandyopadhyay A.  
ACS APPLIED MATERIALS & INTERFACES, vol.12, no.46, pp.51263-51272, 2020 (SCI-Expanded)
- XI. **Additively manufactured calcium phosphate reinforced CoCrMo alloy: Bio-tribological and biocompatibility evaluation for load-bearing implants**  
Bandyopadhyay A., Shivaram A., Isik M., Avila J. D., Dernell W. S., Bose S.  
ADDITIVE MANUFACTURING, vol.28, pp.312-324, 2019 (SCI-Expanded)
- XII. **Microstructural evolution and mechanical properties of biomedical Co-Cr-Mo alloy subjected to high-pressure torsion**  
Isik M., Niinomi M., Cho K., Nakai M., Liu H., Yilmazer H., Horita Z., Sato S., Narushima T.  
JOURNAL OF THE MECHANICAL BEHAVIOR OF BIOMEDICAL MATERIALS, vol.59, pp.226-235, 2016 (SCI-Expanded)
- XIII. **The Effect of Post-Heat Treatment on Microstructure of 316L Cold-Sprayed Coatings and Their Corrosion Performance**  
DİKİCİ B., YILMAZER H., Ozdemir I., Isik M.  
JOURNAL OF THERMAL SPRAY TECHNOLOGY, vol.25, no.4, pp.704-714, 2016 (SCI-Expanded)
- XIV. **Grain Refinement Mechanism and Evolution of Dislocation Structure of Co-Cr-Mo Alloy Subjected to High-Pressure Torsion**  
Isik M., Niinomi M., Liu H., Cho K., Nakai M., Horita Z., Sato S., Narushima T., YILMAZER H., Nagasako M.  
MATERIALS TRANSACTIONS, vol.57, no.7, pp.1109-1118, 2016 (SCI-Expanded)
- XV. **Optimization of Microstructure and Mechanical Properties of Co-Cr-Mo Alloys by High-Pressure Torsion and Subsequent Short Annealing**  
Isik M., Niinomi M., Liu H., Cho K., Nakai M., Horita Z., Narushima T., Ueda K.  
MATERIALS TRANSACTIONS, vol.57, no.11, pp.1887-1896, 2016 (SCI-Expanded)
- XVI. **Microstructural Analysis of Biomedical Co-Cr-Mo Alloy Subjected to High-Pressure Torsion Processing**  
IŞIK M.  
KEY ENGINEERING MATERIALS, vol.616, 2014 (SCI-Expanded)

## Articles Published in Other Journals

- I. **The influence of selective laser melting and directed energy deposition applications on the**

### **microstructure of Inconel 718 alloy**

Isik M.

Niğde Ömer Halisdemir Üniversitesi Mühendislik Bilimleri Dergisi, vol.12, no.1, pp.272-279, 2023 (Peer-Reviewed Journal)

### **II. Directed energy deposition process development for functionally gradient Copper-Inconel 718 materials**

IŞIK M.

Journal of Additive Manufacturing Technologies, vol.1, no.3, pp.581, 2021 (Peer-Reviewed Journal)

### **III. Topology optimization and finite elemental analysis for an inconel 718 engine mounting bracket manufactured via electron beam melting**

IŞIK M.

Topology optimization and manufacturing of engine bracket using electron beam melting, vol.1, no.3, pp.583, 2021 (Peer-Reviewed Journal)

## **Supported Projects**

Işık M., TUBITAK Project, Elektrikli Taşıtlar İçin Batarya Teknolojileri Araştırma Ve Geliştirme Platformu (Bateg), 2023 - 2026

Işık M., TUBITAK Project, Eklemeli İmalat ile üretilmiş parça yüzeylerinin iyileştirilmesi için kuru elektro-parlatma yöntemi geliştirilmesi, 2022 - 2025

IŞIK M., Koç B., TUBITAK Project, YENİ NESİL 3BOYUTLU YAZICI İMALAT TEKNOLOJİLERİ, 2021 - 2025

## **Metrics**

Publication: 20

Citation (WoS): 164

Citation (Scopus): 175

H-Index (WoS): 8

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