

## Asst. Prof. MUSTAFA SAFA YILMAZ

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### International Researcher IDs

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ScopusID: 26323925100

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### Education Information

Doctorate, Gebze Technical University, Institute Of Science, Turkey 2012 - 2018

Postgraduate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Turkey 2011 - 2012

Undergraduate, Yildiz Technical University, Faculty Of Chemical And Metallurgical Engineering, Turkey 2005 - 2011

### Research Areas

Tribology, NDT Engineering, Casting Methods, Non-traditional manufacturing methods, Welding Methods, Material, Plastic Forming Methods, Mechanical Testing, Testing and Control of Materials, Mechanical Properties, Physical Properties, Corrosion and Corrosion Protection, Composites, Biomaterials, Thermal Treatment, Plating, Material Characterization, Mechanical Metallurgy, Metallic Materials, Surface Finishing Processes, Non-Ferrous Alloy Production, Principles of Foundry Technology, Electrolytic Coating, Iron and Steel Production, Electrometallurgy, Powder Metallurgy

### Academic Titles / Tasks

Assistant Professor, Fatih Sultan Mehmet Foundation University, Faculty Of Engineering, Department Of Biomedical Engineering, 2019 - 2023

Research Assistant, Gebze Technical University, Faculty Of Engineering, Department Of Materials Science And Engineering, 2012 - 2018

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

- I. **Effect of copper powder addition on the product quality of sintered stainless steels**  
YILMAZ M. S., Kayacan M. Y., Uzun A.  
MATERIALS TESTING, vol.66, pp.611-624, 2024 (SCI-Expanded)
- II. **Development of an Alternative Heat Treatment to the Traditional T6 Heat Treatment of AlSi10Mg Alloy Produced by Additive Manufacturing**  
Tütük İ., Ural M. M., YILMAZ M. S., Özer G.  
Journal of Materials Engineering and Performance, 2024 (SCI-Expanded)
- III. **Effects of heat treatment on surface integrity and wear performance of Inconel 718 alloy fabricated**

**by laser powder bed fusion process additive manufacturing under different laser power and scanning speed parameters**

Sunay N., Kaya M., YILMAZ M. S., KAYNAK Y.

Journal of the Brazilian Society of Mechanical Sciences and Engineering, vol.45, no.8, 2023 (SCI-Expanded)

- IV. **Aging heat treatment of additively manufactured maraging steels in nitrogen containing atmospheres**  
Çakan D., Ertuğrul O., YILMAZ M. S.  
Materials Today Communications, vol.35, 2023 (SCI-Expanded)
- V. **Dry sliding wear behavior of 316 L stainless steel produced by laser powder bed fusion: A comparative study on test temperature**  
Khan H. M., Yilmaz M. S., Karabeyoğlu S. S., KISASÖZ A., Özer G.  
Materials Today Communications, vol.34, 2023 (SCI-Expanded)
- VI. **Effect of Drag Finish Post-processing on Surface Integrity and Wear Behavior of Ti-6Al-4V Fabricated by Laser Powder Bed Fusion Additive Manufacturing**  
Gunessu E., Yilmaz M. S., Tascioglu E., Sharif S., KAYNAK Y.  
JOURNAL OF MATERIALS ENGINEERING AND PERFORMANCE, vol.31, no.12, pp.9962-9971, 2022 (SCI-Expanded)
- VII. **Effect of heat treatments on the microstructure and wear behaviour of a selective laser melted maraging steel**  
Ozer G., Khan H. M., Tarakci G., Yilmaz M. S., Yaman P., Karabeyoglu S. S., Kisasoz A.  
PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS PART E-JOURNAL OF PROCESS MECHANICAL ENGINEERING, vol.236, no.6, pp.2526-2535, 2022 (SCI-Expanded)
- VIII. **Effect of building orientations and heat treatments on AlSi10Mg alloy fabricated by selective laser melting: microstructure evolution, mechanical properties, fracture mechanism and corrosion behavior**  
Tarakci G., Khan H. M., Yilmaz M. S., Ozer G.  
RAPID PROTOTYPING JOURNAL, vol.28, no.8, pp.1609-1621, 2022 (SCI-Expanded)
- IX. **Corrosion of Additively Manufactured Metallic Components: A Review**  
Khan H. M., Ozer G., Yilmaz M. S., Koc E.  
ARABIAN JOURNAL FOR SCIENCE AND ENGINEERING, vol.47, no.5, pp.5465-5490, 2022 (SCI-Expanded)
- X. **Improvement of Corrosion Resistance of Maraging Steel Manufactured by Selective Laser Melting Through Intercritical Heat Treatment**  
Khan H. M., Ozer G., Yilmaz M. S., Tarakci G.  
CORROSION, vol.78, no.3, pp.239-248, 2022 (SCI-Expanded)
- XI. **INVESTIGATION OF THE EFFECTS OF DIFFERENT RETROGRESSION AND RE-AGING PARAMETERS APPLIED TO THE 7075 ALLOY ON THE MICRO-ARC OXIDATION PROCESS**  
Yilmaz M. S., Ozer G., Sahin O., KARAASLAN A.  
SURFACE REVIEW AND LETTERS, vol.28, no.09, 2021 (SCI-Expanded)
- XII. **Effects of hot isostatic pressing and heat treatments on structural and corrosion properties of direct metal laser sintered parts**  
Yilmaz M. S., ozer G., Oter Z. C., Ertugrul O.  
RAPID PROTOTYPING JOURNAL, vol.27, no.5, pp.1059-1067, 2021 (SCI-Expanded)
- XIII. **Effect of HIP process and subsequent heat treatment on microstructure and mechanical properties of direct metal laser sintered AlSi10Mg alloy**  
Ertugrul O., Oter Z. C., Yilmaz M. S., Sahin E., Coskun M., Tarakci G., Koc E.  
RAPID PROTOTYPING JOURNAL, vol.26, no.8, pp.1421-1434, 2020 (SCI-Expanded)
- XIV. **Investigation of the surface quality and dimensional accuracy of polymer patterns produced by selective laser sintering (SLS) method for investment casting (IC)**  
Ozer G., Ozbay B., Oter Z. C., Tarakci G., Yilmaz M. S., Bulduk M. E., Koc E., ACAR S., GÜLER K. A.  
INTERNATIONAL JOURNAL OF CAST METALS RESEARCH, vol.33, no.2-3, pp.146-152, 2020 (SCI-Expanded)
- XV. **Investigation of the effects of different heat treatment parameters on the corrosion and mechanical properties of the AlSi10Mg alloy produced with direct metal laser sintering**

- Ozer G., Tarakci G., Yilmaz M. S., Oter Z. C., Surmen O., Akca Y., Coskun M., Koc E.  
MATERIALS AND CORROSION-WERKSTOFFE UND KORROSION, vol.71, no.3, pp.365-373, 2020 (SCI-Expanded)
- XVI. **Benefits of laser beam based additive manufacturing in die production**  
Oter Z. C., Coskun M., Akca Y., Surmen O., Yilmaz M. S., Ozer G., Tarakci G., Koc E.  
OPTIK, vol.176, pp.175-184, 2019 (SCI-Expanded)
- XVII. **Support optimization for overhanging parts in direct metal laser sintering**  
Oter Z. C., Coskun M., Akca Y., Surmen O., Yilmaz M. S., Ozer G., Tarakci G., Khan H. M., Koc E.  
OPTIK, vol.181, pp.575-581, 2019 (SCI-Expanded)
- XVIII. **Applying high voltage cathodic pulse with various pulse durations on aluminium via micro-arc oxidation (MAO)**  
Yilmaz M. S., Sahin O.  
SURFACE & COATINGS TECHNOLOGY, vol.347, pp.278-285, 2018 (SCI-Expanded)
- XIX. **Effects of Pulse Duration on Structure and Surface Characteristics of Micro-Arc Oxidation Coatings Formed on Aluminum Alloy**  
Yilmaz M. S., Sahin O.  
ACTA PHYSICA POLONICA A, vol.129, no.4, pp.673-676, 2016 (SCI-Expanded)
- XX. **A Study on Modification of Micro-Alloy Steel Surfaces with Different Hard Materials Via Electro-Spark Deposition Method**  
Cakir A., Yilmaz M. S., Ribalko A., Korkmaz K.  
ACTA PHYSICA POLONICA A, vol.127, no.4, pp.1410-1413, 2015 (SCI-Expanded)
- XXI. **Fabrication of Bioactive Coatings on Steel Substrates by Electro-Spark Deposition (ESD) and Micro-Arc Oxidation (MAO) Methods**  
Yilmaz M. S., Cakir A., Ribalko A., Korkmaz K.  
ACTA PHYSICA POLONICA A, vol.127, no.4, pp.1277-1281, 2015 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Investigation of High Energy Single Pulse Effect on Micro Arc Oxidation (MAO) Process on Aluminium**  
YILMAZ M. S., ŞAHİN O.  
International Journal of Mining, Materials, and Metallurgical Engineering (IJMMME), vol.5, 2019 (Peer-Reviewed Journal)
- II. **The application of Zirconium Base Coatings on Steel Surfaces by Using Electro-Spark Deposition (ESD) Method**  
KORKMAZ K., YILMAZ M. S.  
Afyon Kocatepe University Journal of Sciences and Engineering, vol.17, no.2, pp.704-709, 2017 (Peer-Reviewed Journal)
- III. **Mikro Ark Oksidasyon (MAO) Prosesinin Eklemeli Üretim (AM) Metodu ile Uyumluluğunun Araştırılması**  
YILMAZ M. S., Clare A. T., ŞAHİN O.  
Afyon Kocatepe Üniversitesi Fen ve Mühendislik Bilimleri Dergisi, vol.16, no.1, pp.36-41, 2016 (Peer-Reviewed Journal)

## Refereed Congress / Symposium Publications in Proceedings

- I. **Aging treatment of Additively Manufactured Maraging 300 Steels under Ar/H<sub>2</sub> Atmosphere**  
Öksüzcan İ., Çakan D., ERTUĞRUL O., YILMAZ M. S.  
4. International Conference on Materials Science, Mechanical and Automotive Engineerings and Technology (IMSMATEC'21 ), Turkey, 28 - 29 May 2021

- II. **Structure and Properties of Additively Manufactured Maraging Steels after Aging Treatment under N<sub>2</sub> Atmosphere**  
Çakan D., Öksüzcan İ., YILMAZ M. S., ERTUĞRUL O.  
4. International Conference on Materials Science, Mechanical and Automotive Engineerings and Technology (IMSMATEC'21), Turkey, 28 - 29 May 2021
- III. **Effects Of Energy Input On Microstructure/Surface Properties Of Additively Manufactured Parts**  
YILMAZ M. S.  
V. International Scientific and Vocational Studies Congress–Engineering (BILMES EN 2020), Turkey, 12 - 13 December 2020
- IV. **The Effects of Hatch distance on the Thermal and Mechanical Properties of AlSi10Mg Parts in Direct Metal Laser Sintering (DMLS) Method**  
YILMAZ M. S., ÖZER G., ÖTER Z. Ç., TARAKÇI G., COŞKUN M., KOÇ E., UYSAL Ü.  
IV. International Scientific and Vocational Congress–Engineering, Ankara, Turkey, 7 - 10 November 2019
- V. **EKLEMELİ İMALAT (DMLS) KULLANILARAK ÜRETİLMİŞ ALSİ10MG NUMUNELERİNDE PARAMETRE/YÜZEY ÖZELLİK İLİŞKİSİNİN İRDELENMESİ**  
YILMAZ M. S.  
II. Ulusal Mühendislikte Bilimsel ve Mesleki Çalışmaları Kongresi, Turkey, 7 - 10 November 2019
- VI. **INFLUENCE OF HOT ISOSTATIC PRESSING AND SUBSEQUENT HEAT TREATMENT ON MECHANICAL PROPERTIES OF DIRECT METAL LASER SINTERED ALSİ10MG ALLOY**  
ERTUĞRUL O., Öter Z., YILMAZ M. S., Şahin E., Coşkun M., Tarakçı G., KOÇ E.  
Additive Manufacturing Conference Turkey, İstanbul, Turkey, 17 - 18 October 2019
- VII. **Ekstrüzyon Preslerinde Enerji Yönetimi**  
Akça Y., ÖZER G., YILMAZ M. S., KOÇ E.  
9th International Aluminium Semposium (ALUS'xx09), İstanbul, Turkey, 10 - 11 October 2019
- VIII. **Effect of Micro Arc Oxidation (MAO) Parameters on Coating/Interface Behaviour of 7075-T6 Aluminium Alloy**  
YILMAZ M. S., ÖZER G., ŞAHİN O., KARAASLAN A.  
8th International Conference on Advanced Technologies, Sarajevo, Bosnia And Herzegovina, 26 - 30 August 2019
- IX. **Investigation of the High Energy Single Pulses Affect on Micro Arc Oxidation Process on Aluminium**  
YILMAZ M. S., ŞAHİN O.  
4th World Congress on Mechanical, Chemical, and Material Engineering (MCM'xx18), 16 - 18 August 2018
- X. **Effect of Electrical Parameters on Tribology of Micro Arc Oxidation (MAO) Coatings Formed on Aluminum**  
YILMAZ M. S., ŞAHİN O.  
2nd International Conference on Tribology, 18 - 20 April 2018
- XI. **The Optimization of the Coating Process Parameters by Electro-Spark Deposition (ESD) Technique Using Steel/Inconel Couple**  
YILMAZ M. S., KORKMAZ K., ÇAKIR A., DOĞRU C.  
3rd Iron and Steel Symposium(UDCS'17)3-5April 2017 Karabuk-TURKEY, 3 - 05 April 2017
- XII. **Seçici Lazer Ergitme (SLM) Metodu ile Üretilmiş AlSi10Mg Parçalarının Mikro Ark Oksidasyon (MAO) ile Yüzey Pürüzlülüğünün Düşürülmesi**  
YILMAZ M. S., Clare A. T.  
1.International Mediterranean Science and Engineering Congress, 26 - 28 October 2016
- XIII. **Mikro Ark Oksidasyon (MAO) Yönteminde Darbe Vuruş Süresinin Kaplama Özelliklerine Etkisi**  
YILMAZ M. S., ŞAHİN O.  
1.Uluslararası Mühendislik Teknolojileri ve Uygulamalı Bilimler Konferansı, 21 - 22 April 2016
- XIV. **Mikro Ark Oksidasyon (MAO) Prosesinin Eklemeli Üretim (AM) Metodu ile Uyumluluğunun Araştırılması**  
YILMAZ M. S., Clare A. T., ŞAHİN O.  
1.Uluslararası Mühendislik Teknolojileri ve Uygulamalı Bilimler Konferansı, 21 - 22 April 2016
- XV. **Effects of Pulse Duration on Structure and Surface Characteristics of Micro Arc Oxidation Coatings**

**Formed on Aluminum Alloy**

YILMAZ M. S., ŞAHİN O.

5th International Advances in Applied Physics and Materials Science Congress, 16 - 19 April 2015

**XVI. A Study on Modification of Micro Alloy Steel Surfaces with Different Hard Materials by Using Electro Spark Deposition Methods**

ÇAKIR A., YILMAZ M. S., RİBALKO A., KORKMAZ K.

4th International Advances in Applied and Materials Science Congress, 24 - 27 April 2014

**XVII. The Effects of Process Parameters of The Duplex Coatings Produced on Steel 0.6C by Electro Sparks (ESD) and Micro Arc Oxidation (MAO)**

YILMAZ M. S., ÇAKIR A., KORKMAZ K.

Uluslararası 11. Kimyasal Fizik Kongresi, 17 - 18 October 2014

**XVIII. Application of Electro Spark Deposition and Micro Arc Oxidation Techniques on Steel Surfaces**

ÇAKIR A., YILMAZ M. S., KORKMAZ K.

Uluslararası 11. Kimyasal Fizik Kongresi, 17 - 18 October 2014

**XIX. Fabrication of Bioactive Coatings on Steel Substrates by Electro Spark Deposition (ESD) and Micro Arc Oxidation (MAO) Methods**

YILMAZ M. S., ÇAKIR A., RİBALKO A., KORKMAZ K.

4th International Advances in Applied and Materials Science Congress, 24 - 27 April 2014

**XX. Improving the Surface Properties of Cp Ti by Pulsed Electro Spark Deposition**

YILMAZ M. S., ATAR E., ŞAHİN O., KAYALI E. S.

3rd International Advances in Applied and Materials Science Congress, 24 - 28 April 2013

**XXI. Saf Titanyum Malzeme Yüzeyinde Alüminyum-Titanyum İntermetalik Tabakasını Oluşturulması**

YILMAZ M. S., ATAR E., ŞAHİN O., KAYALI E. S.

6. Alüminyum Sempozyumu, 3 - 04 October 2013