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International Researcher IDs

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Education Information

Doctorate, Istanbul Technical University, Lisansüstü Eğitim Enstitüsü, Malzeme Bilimi Ve Mühendisliği, Turkey 2010 - 2021

Postgraduate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Malzeme Bilimi Ve Mühendisliği, Turkey 2008 - 2010

Undergraduate, Istanbul Technical University, Kimya-Metalurji Fakültesi, Metalurji Ve Malzeme Mühendisliği, Turkey 2004 - 2008

Foreign Languages

English, C2 Mastery

Dissertations

Doctorate, NOVEL APPROACHES FOR PROTECTION OF LIGHT METALS UNDER VARIOUS WEAR CONDITIONS VIA MICRO ARC OXIDATION PROCESS, Istanbul Technical University, Fen Bilimleri Enstitüsü, 2021

Postgraduate, Mikro ark oksidasyon yöntemiyle titanyum esaslı implantların yüzey özelliklerinin geliştirilmesi, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, İleri Teknolojiler Anabilim Dalı, 2010

Research Areas

Metallurgical and Materials Engineering, Material science and engineering, Mechanical Properties, Chemical and Electrochemical Properties, Biomaterials, Thermal Treatment, Plating, Material Characterization, Mechanical Metallurgy, Metallic Materials, Structure-Property Relationship, Engineering and Technology

Academic Titles / Tasks

Assistant Professor, Istanbul Technical University, Kimya-Metalurji, Metalurji Ve Malzeme Mühendisliği, 2023 - Continues
Lecturer PhD, Istanbul Technical University, Kimya-Metalurji, Metalurji Ve Malzeme Mühendisliği, 2021 - 2023
Lecturer, Istanbul Technical University, Kimya-Metalurji, Metalurji Ve Malzeme Mühendisliği, 2018 - 2021
Expert, Istanbul Technical University, Kimya-Metalurji, Metalurji Ve Malzeme Mühendisliği, 2017 - 2018
Research Assistant, Istanbul Technical University, Kimya-Metalurji, Metalurji Ve Malzeme Mühendisliği, 2012 - 2017

Academic and Administrative Experience

Deputy Head of Department, Istanbul Technical University, Kimya-Metalurji, Metalurji Ve Malzeme Mühendisliği, 2023 - Continues
Erasmus Program Department Coordinator, Istanbul Technical University, Kimya-Metalurji, Metalurji Ve Malzeme Mühendisliği, 2023 - Continues
Bölüm Stratejik Plan Komisyonu Üyesi, Istanbul Technical University, Kimya-Metalurji, Metalurji Ve Malzeme Mühendisliği, 2022 - Continues
Bölüm Kalite Komisyonu Üyesi, Istanbul Technical University, Kimya-Metalurji, Metalurji Ve Malzeme Mühendisliği, 2022 - Continues

Courses

MATLAB, Undergraduate, 2022 - 2023
Malzeme Bilimi, Undergraduate, 2023 - 2024
Malzeme Bilimi, Undergraduate, 2023 - 2024
MATLAB, Undergraduate, 2022 - 2023
Probability and Statistics, Undergraduate, 2021 - 2022

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Unveiling the mechanisms of coating formation during micro-arc oxidation of titanium in Na₂HPO₄ electrolyte**
Maj Ł., Muhaffel F., Jarzębska A., Trelka A., Balin K., Bieda M., Çimenoglu H.
Surface and Coatings Technology, vol.476, 2024 (SCI-Expanded)
- II. **Wear performance of composite dual-layer coated Al-12Si alloy: Effect of Al₂Ce reinforcement and micro-arc oxidation**
Kaba M., Cengiz S., Muhaffel F., Çimenoglu H.
Materials Chemistry and Physics, vol.312, 2024 (SCI-Expanded)
- III. **Improved creep resistance of AZ91 magnesium alloy after the micro arc oxidation process**
Selvi E., Muhaffel F., Filiz H. İ., VANLI A. S., Baydoğan M.
Materials Chemistry and Physics, vol.309, 2023 (SCI-Expanded)
- IV. **Indentation creep behavior of Fe-8Ni-xZr oxide dispersion strengthened alloys**
Tekin M., Muhaffel F., Kotan H., Baydoğan M.
Materialpruefung/Materials Testing, vol.65, no.9, pp.1405-1415, 2023 (SCI-Expanded)
- V. **Elevated Temperature Wear Behavior of AZ91 Magnesium Alloy After Micro-Arc Oxidation in Single and Dual Phase Electrolytes**
Selvi E., Kaba M., Muhaffel F., Vanlı A. S., Baydoğan M.
JOURNAL OF TRIBOLOGY, vol.145, no.7, pp.71701, 2023 (SCI-Expanded)
- VI. **In-situ formation of Ag nanoparticles in the MAO coating during the processing of cp-Ti**
Maj Ł., Fogarassy Z., Wojtas D., Jarzębska A., Muhaffel F., Sulyok A., Góral A., Kulczyk M., Çimenoglu H., Bieda M.
Scientific reports, vol.13, no.1, pp.3230, 2023 (SCI-Expanded)

- VII. **Surface degradation of nitrided hot work tool steels under repeated impact-sliding contacts: Effect of compound layer**
Kaba M., Altay M., Akyildiz E., Muhaffel F., Ozkurt S., Atar E., Baydoğan M., Çimenoğlu H.
Wear, vol.498-499, 2022 (SCI-Expanded)
- VIII. **Titania coating formation on hydrostatically extruded pure titanium by micro-arc oxidation method**
Maj Ł., Wojtas D., Jarzębska A., Bieda M., Trembecka-Wójciga K., Chulist R., Koziół W., Góral A., Trelka A., Janus K., et al.
Journal of Materials Science and Technology, vol.111, pp.224-235, 2022 (SCI-Expanded)
- IX. **Thermal oxidation of a porous Ti-23Nb alloy for wear related biomedical applications: Effect of oxidation duration**
Ibrahim M. K., Kaba M., Muhaffel F., Ağaoğulları D., Çimenoğlu H.
SURFACE & COATINGS TECHNOLOGY, vol.439, 2022 (SCI-Expanded)
- X. **Low Friction and High Wear Resistance of Plasma Electrolytic Oxidation (PEO)-Coated AZ31 Mg Alloy Sliding against Hydrogenated DLC (a-C-H) at Elevated Temperatures**
Bhowmick S., Muhaffel F., Eskandari B., Çimenoğlu H., Alpas A. T.
COATINGS, vol.12, no.5, 2022 (SCI-Expanded)
- XI. **Synthesis and characterization of (HfMoTiWZr)C high entropy carbide ceramics**
Kavak S., Bayrak K. G., Bellek M., Mertdinç S., Muhaffel F., Gökçe H., Ayas E., Derin B., Öveçoğlu M. L., Ağaoğulları D.
CERAMICS INTERNATIONAL, vol.48, no.6, pp.7695-7705, 2022 (SCI-Expanded)
- XII. **Influence of Electrolyte Compositions and Electrical Parameters on Thermal Properties of Micro-Arc Oxidized AZ91 Alloy**
Selvi E., Muhaffel F., Yurekturk Y., VANLI A. S., Baydoğan M.
JOURNAL OF MATERIALS ENGINEERING AND PERFORMANCE, vol.31, no.2, pp.1667-1678, 2022 (SCI-Expanded)
- XIII. **Surface characteristics of plasma electrolytic oxidation coatings on Cp-Ti and hot-dip aluminised Cp-Ti**
Celtik C., Yurekturk Y., GECÜ R., Kaboglu C., Muhaffel F.
TRANSACTIONS OF THE INSTITUTE OF METAL FINISHING, vol.100, pp.159-165, 2022 (SCI-Expanded)
- XIV. **Effect of the Hydrothermal Treatment on the Microstructural Characteristics and Bioactivity of the Ag Incorporated MAO Coatings Fabricated on Ti6Al7Nb Alloy**
Aydogan D. T., Muhaffel F., Çimenoğlu H.
Surface Innovations, vol.10, pp.252-262, 2022 (SCI-Expanded)
- XV. **A study to enhance the mechanical durability of the MAO coating fabricated on the 7075 Al alloy for wear-related high temperature applications**
Muhaffel F., Baydoğan M., Çimenoğlu H.
SURFACE & COATINGS TECHNOLOGY, vol.409, 2021 (SCI-Expanded)
- XVI. **Role of counterfaces with DLC and N-based coatings on frictional behaviour of AZ31 magnesium alloy subjected to plasma electrolytic oxidation (PEO) process**
Bhowmick S., Muhaffel F., Sun G., Cimenoglu H., Alpas A. T.
SURFACE & COATINGS TECHNOLOGY, vol.397, 2020 (SCI-Expanded)
- XVII. **Influence of alumina and zirconia incorporations on the structure and wear resistance of titania-based MAO coatings**
Muhaffel F., Kaba M., Cenipura G., Derin B., Kruk A., Atar E., Çimenoğlu H.
Surface and Coatings Technology, vol.377, 2019 (SCI-Expanded)
- XVIII. **Improving wear resistance of 304 stainless steel reinforced AA7075 aluminum matrix composite by micro-arc oxidation**
GECÜ R., Yürektürk Y., Tekoğlu E., Muhaffel F., KARAASLAN A.
SURFACE & COATINGS TECHNOLOGY, vol.368, pp.15-24, 2019 (SCI-Expanded)
- XIX. **Development of corrosion and wear resistant micro-arc oxidation coating on a magnesium alloy**
Muhaffel F., Çimenoğlu H.
SURFACE & COATINGS TECHNOLOGY, vol.357, pp.822-832, 2019 (SCI-Expanded)
- XX. **Surface modification of Ti6Al4V by micro-arc oxidation in AgC2H3O2-containing electrolyte**

- Aydogan D. T., Muhaffel F., Acar O. K., Topcuoglu E. N., Kulekci H. G., Kose G. T., Baydoğan M., Çimenoglu H.
SURFACE INNOVATIONS, vol.6, pp.277-285, 2018 (SCI-Expanded)
- XXI. **Optimisation of micro-arc oxidation electrolyte for fabrication of antibacterial coating on titanium**
Aydogan D. T., Muhaffel F., Kilic M. M., Acar O. K., Cempura G., Baydoğan M., Gül Karagüler N., Kose G. T., Czyrska-Filemonowicz A., Çimenoglu H.
MATERIALS TECHNOLOGY, vol.33, no.2, pp.119-126, 2018 (SCI-Expanded)
- XXII. **Influence of electrolyte composition on microstructure, adhesion and bioactivity of micro-arc oxidation coatings produced on biomedical Ti6Al7Nb alloy**
Karbowniczek J., Muhaffel F., Cempura G., Çimenoglu H., Czyrska-Filemonowicz A.
SURFACE & COATINGS TECHNOLOGY, vol.321, pp.97-107, 2017 (SCI-Expanded)
- XXIII. **Fabrication of oxide layer on zirconium by micro-arc oxidation: Structural and antimicrobial characteristics**
Fidan S., Muhaffel F., Riool M., Cempura G., de Boer L., Zaat S. A. J., Czyrska-Filemonowicz A., Cimenoglu H.
MATERIALS SCIENCE & ENGINEERING C-MATERIALS FOR BIOLOGICAL APPLICATIONS, vol.71, pp.565-569, 2017 (SCI-Expanded)
- XXIV. **Formation of Corrosion-Resistant Alumina Coating on 6061 Aluminum Alloy by the Combination of Micro Arc Oxidation and Sealing Treatments**
Paksoy H., MUHAFFEL F., Koca M., Gökçe Ö., Mohammadzadeh S., ÇİMENOĞLU H.
Materials Technology, vol.51, pp.117-121, 2017 (SCI-Expanded)
- XXV. **Characteristics of multi-layer coatings synthesized on Ti6Al4V alloy by micro-arc oxidation in silver nitrate added electrolytes**
Muhaffel F., Cempura G., Menekse M., Czyrska-Filemonowicz A., Gül Karagüler N., Çimenoglu H.
Surface and Coatings Technology, vol.307, pp.308-315, 2016 (SCI-Expanded)
- XXVI. **Effect of sintering techniques on the microstructure and mechanical properties of niobium borides**
Balci O., AGAOGULLARI D., MUHAFFEL F., Öveçoğlu M. L., CIMENOGLU H., Duman I.
JOURNAL OF THE EUROPEAN CERAMIC SOCIETY, vol.36, no.13, pp.3113-3123, 2016 (SCI-Expanded)
- XXVII. **The effect of La₂O₃ on the microstructure and room temperature mechanical properties of t-ZrO₂**
Nilufer I. B., GOKCE H., MUHAFFEL F., Öveçoğlu M. L., Çimenoglu H.
CERAMICS INTERNATIONAL, vol.42, no.8, pp.9443-9447, 2016 (SCI-Expanded)
- XXVIII. **CHARACTERISATION AND TRIBOLOGICAL PROPERTIES OF HARD ANODISED AND MICROARC OXIDISED 5754 QUALITY ALUMINUM ALLOY**
Övündür M., MUHAFFEL F., Çimenoglu H.
Journal of the Balkan Tribological Association, vol.22, no.1, pp.233-239, 2016 (SCI-Expanded)
- XXIX. **Synthesis of zirconia-incorporated titania layer by microarc oxidation for biomedical applications**
Muhaffel F., CIMENOGLU H.
SURFACE AND INTERFACE ANALYSIS, vol.47, no.13, pp.1166-1173, 2015 (SCI-Expanded)
- XXX. **Characterization of micro arc oxidized 6082 aluminum alloy in an electrolyte containing carbon nanotubes**
Yurekturk Y., Muhaffel F., BAYDOGAN M.
SURFACE & COATINGS TECHNOLOGY, vol.269, pp.83-90, 2015 (SCI-Expanded)
- XXXI. **Characterisation and corrosion behaviour of plasma electrolytic oxidation coatings on high pressure die cast Mg-5Al-0.4Mn-xCe (x=0, 0.5, 1) alloys**
Muhaffel F., Mert F., CIMENOGLU H., HOECHE D., Zheludkevich M. L., BLAWERT C.
SURFACE & COATINGS TECHNOLOGY, vol.269, pp.200-211, 2015 (SCI-Expanded)
- XXXII. **Characterisation and corrosion behaviour of plasma electrolytic oxidation coatings on high pressure die cast Mg 5Al 0 4Mn xCe x 0 0 5 1 alloys**
MUHAFFEL F., MERT F., Çimenoglu H., Hoeche D., Zheludkevich M. L., Blawert C.
SURFACE & COATINGS TECHNOLOGY, vol.269, pp.200-211, 2015 (SCI-Expanded)
- XXXIII. **Characteristics of multi-layer coating formed on commercially pure titanium for biomedical applications**
Teker D., MUHAFFEL F., MENEKSE M., KARAGULER N. G., BAYDOGAN M., CIMENOGLU H.

MATERIALS SCIENCE & ENGINEERING C-MATERIALS FOR BIOLOGICAL APPLICATIONS, vol.48, pp.579-585, 2015 (SCI-Expanded)

- XXXIV. **Fabrication and characterization of nano-HA-45S5 bioglass composite coatings on calcium-phosphate containing micro-arc oxidized CP-Ti substrates**
Farnoush H., Muhaffel F., CIMENOGLU H.
APPLIED SURFACE SCIENCE, vol.324, pp.765-774, 2015 (SCI-Expanded)
- XXXV. **Wear and corrosion characteristics of novel alumina coatings produced by micro arc oxidation on AZ91D magnesium alloy**
Tazegul O., Muhaffel F., MEYDANOGLU O., BAYDOGAN M., KAYALI E. S., CIMENOGLU H.
SURFACE & COATINGS TECHNOLOGY, vol.258, pp.168-173, 2014 (SCI-Expanded)
- XXXVI. **Effect of incorporating carbon nanotubes into electrolyte on surface morphology of micro arc oxidized Cp-Ti**
Yazici S. K., Muhaffel F., BAYDOGAN M.
APPLIED SURFACE SCIENCE, vol.318, pp.10-14, 2014 (SCI-Expanded)
- XXXVII. **Heat Treated and As Plated Electroless Duplex Ni P Ni B Coatings Evaluation of Hardness and Wear Resistance**
Dil G., GÖKŞENLİ A., Çalı Ç., MUHAFFEL F., AYDENİZ A. İ., YILDIZ R. A., YÜKSEL B.
Advanced Materials Research, no.853, pp.264-269, 2014 (SCI-Expanded)
- XXXVIII. **Electroless ni-b-w coatings for improving hardness, wear and corrosion resistance**
Aydeniz A. İ., Gökşenli A., Dil G., Muhaffel F., Calli C., Yüksel B.
Materiali in Tehnologije, vol.47, no.6, pp.803-806, 2013 (SCI-Expanded)

Articles Published in Other Journals

- I. **Tribological Performance of a Plasma Electrolytic Oxidation-Coated Mg Alloy in Graphene-Incorporated Ethanol**
Bhowmick S., Muhaffel F., Shirzadian S., Cimenoglu H., Alpas A. T.
Lubricants, vol.12, no.1, pp.9-16, 2024 (Peer-Reviewed Journal)
- II. **Wear behavior of in-situ oxide dispersion strengthened Fe-8Ni alloy with Zr additions**
Tekin M., Muhaffel F., Kotan H., Baydoğan M.
Journal of Metals, Materials and Minerals, vol.33, no.1, pp.1-7, 2023 (Scopus)
- III. **Impact-Sliding Wear Behaviour of Nitrided H13 Steel Tool Steels**
akyıldız e., altay m., MUHAFFEL F., özkurt s., ATAR E., ÇİMENOĞLU H.
Key Engineering Materials, vol.813, pp.417-422, 2019 (Scopus)
- IV. **SYNTHESIS OF ZIRCONIA/MAGNESIA COMPOSITE COATING ON AZ91 MAGNESIUM ALLOY**
SELVİ E., MUHAFFEL F., BAYDOĞAN M.
Journal of Chemical Technology and Metallurgy, 2019 (Scopus)
- V. **Characteristic of MAO coatings formed on CuAl2 in-situ reinforced aluminum matrix composites**
Mafouz D., Paksoy A., Muhaffel F., Tazegul O., Çimenoglu H.
Archives of Materials Science and Engineering, vol.79, no.2, pp.60-63, 2016 (Scopus)
- VI. **Oxidized Titanium**
GÜLERYÜZ H., Muhaffel F., Çimenoglu H.
MATERIALS FOR TOTAL JOINT ARTHROPLASTY: BIOTRIBOLOGY OF POTENTIAL BEARINGS, pp.355-393, 2016 (Peer-Reviewed Journal)
- VII. **Characterization and Tribological Properties of Hard Anodized and Micro Arc Oxidized 5754 Quality Aluminum Alloy**
Melih Ö., MUHAFFEL F., ÇİMENOĞLU H.
Tribology in Industry, vol.37, no.1, pp.55-59, 2015 (Scopus)
- VIII. **Preparation and characterization of hydrothermally treated hydroxyapatite containing titania layer on commercially pure titanium**

Teker D., Muhaffel F., Çimenoglu H.

Archives of Materials Science and Engineering, vol.68, no.1, pp.5-9, 2014 (Scopus)

IX. Characterization and wear properties of carbon nanotubes incorporated ceramic coatings on Ti6Al4V and Ti6Al7Nb alloys

Yazıcı S. K., MUHAFFEL F., YÜREKTÜRK Y., BAYDOĞAN M.

Journal of Achievements in Materials and Manufacturing Engineering, vol.65, no.2, pp.73-78, 2014 (Scopus)

X. Effect of Voltage Parameters on Surface Morphology of Micro Arc Oxidized Cp Titanium

Selim Kaan Y., MUHAFFEL F., BAYDOĞAN M.

Defect and Diffusion Forum, vol.353, pp.211-216, 2014 (Scopus)

XI. Effect of Process parameters on the Surface Properties of Micro Arc Oxidized 6082 Aluminum Alloy
YÜREKTÜRK Y., MUHAFFEL F., BAYDOĞAN M.

Academic Journal of Science, vol.2, no.2, pp.379-384, 2013 (Peer-Reviewed Journal)

Books & Book Chapters

I. Oxidized Titanium

GÜLERYÜZ H., MUHAFFEL F., ÇİMENOĞLU H.

in: Materials for Total Joint Arthroplasty Biotribology of Potential Bearings, Robert Sonntag, Jan Philippe Kretzer, Editor, Imperial College Press, Londrina, pp.355-394, 2015

Refereed Congress / Symposium Publications in Proceedings

I. Evaluation of the Microstructure and Tribological Properties of the Micro-arc Oxidised Biomedical Titanium

Muhaffel F., Kaba M., Baydoğan M., Çimenoglu H.

6th Young Tribological Researcher Symposium, Nuremberg, Germany, 24 - 25 July 2023, pp.11

II. Boriding of Ti20Nb Alloy Produced by Powder Metallurgy for Tribological Applications

Soruşbay B., Kaba M., Muhaffel F., Çimenoglu H.

INTERNATIONAL GRADUATE RESEARCH SYMPOSIUM, 01 June 2022, pp.127

III. Improvement of Micro-Arc Oxidation Coating Formed on 7075 Al Alloy for Reducing the Coefficient of Friction

Küllü G., Kaba M., Muhaffel F., Çimenoglu H.

INTERNATIONAL GRADUATE RESEARCH SYMPOSIUM, 01 June 2022, pp.130

IV. HIGH TEMPERATURE WEAR BEHAVIOR OF HOT-DIP ALUMINIZED INCONEL 718

Kavukcu A., Kaba M., Muhaffel F., Baydoğan M.

31st International Conference on Metallurgy and Materials, METAL 2022, Brno, Czech Republic, 18 - 19 May 2022, pp.493-499

V. Impact-Sliding Wear Behaviour of Nitrided H13 Steel Tool Steels

Akyıldız E., Altay M., Muhaffel F., Özkurt S., Atar E., Çimenoglu H.

33rd International Conference on Surface Modification Technologies, Naples, Italy, 26 - 28 June 2019

VI. Impact Sliding Wear Performances of Quenched and Tempered Hot Work Tool Steels

akyıldız e., MUHAFFEL F., altay m., özkurt s., ATAR E., ÇİMENOĞLU H.

UDCS'xx19 Fourth International Iron and Steel Symposium, Karabük, Turkey, 4 - 06 April 2019

VII. Influence of Nitriding on Impact Sliding Wear Behaviour of AISI H13 Tool Steel

Aydın B., Baş B., Kaba M., Altay M., Muhaffel F., Inan U., Seçkin Ö., Atar E., Çimenoglu H.

UDCS'19 Fourth International Iron and Steel Symposium, Karabük, Turkey, 4 - 06 April 2019, pp.457-460

VIII. Effect of Isothermal Annealing on Microstructure and Mechanical Properties of a High Carbon Steel
KUZKAYA S., YÜREKTÜRK Y., MUHAFFEL F., BAYDOĞAN M.

Fourth International Iron Steel Symposium, 4 - 06 April 2019

- IX. Improving Wear Resistance of We43 Magnesium Alloy by Combination of Cold Spray and Micro Arc Oxidation Techniques**
Kaba M., Muhaffel F., Malayoğlu U., Çimenoğlu H.
The International Conference on Materials Science, Machine and Automotive Engineerings and Technology, İzmir, Turkey, 10 - 12 April 2018, pp.573
- X. Synthesis of an Antibacterial and Wear-resistant Multilayer Coating on Biomedical Titanium-based alloys**
MUHAFFEL F., Aydogan D. T., Menekse M., GÜL-KARAGÜLER N., BAYDOĞAN M., ÇİMENOĞLU H.
TURKEYTRIB 2018, 18 - 20 April 2018
- XI. Influence of Thermal Oxidation Time on Tribology Behaviour of Ti6Al4V Alloy**
Çelik D., TAZEGÜL O., MUHAFFEL F., ÇİMENOĞLU H.
TURKEYTRIB 2018, 18 - 20 April 2018
- XII. Structure and Tribological Properties of Fluidized Bed Nitrided Surfaces on H13 Hot Work Tool Steel**
Teoman Z. C., MUHAFFEL F., ÇİMENOĞLU H.
TURKEYTRIB 2018, 18 - 20 April 2018
- XIII. Nitriding of Inconel 713LC Superalloy via Fluidized Bed**
Yücel M., MUHAFFEL F., ÇİMENOĞLU H.
The 2nd International Conference on Material Science and Technology (IMSTEC 2017), 11 - 13 October 2017
- XIV. The Influence of Trisodium Phosphate Concentration on Tribological and Corrosion Properties of MAO'ed AZ91 Magnesium Alloy**
MUHAFFEL F., VANLI A. S., ÇİMENOĞLU H.
The 2nd International Conference on Material Science and Technology (IMSTEC 2017), 11 - 13 October 2017
- XV. A Ceramic Coating for Corrosion Protection on AISI 316Ti Stainless Steel**
TAŞLIÇAY C., YÜREKTÜRK Y., MUHAFFEL F., BAYDOĞAN M.
The 2nd International Conference on Material Science and Technology (IMSTEC 2017), 11 - 13 October 2017
- XVI. Synthesis of Zirconia/Magnesia Composite Coating on AZ91 Magnesium Alloy**
SELVİ E., MUHAFFEL F., BAYDOĞAN M.
The 2nd International Conference on Material Science and Technology (IMSTEC 2017), 11 - 13 October 2017
- XVII. Wear characteristics of micro arc oxidized AZ91 magnesium alloy in a chlorine-rich environment**
MUHAFFEL F., VANLI A. S., ÇİMENOĞLU H.
9th International Conference on Tribology (Balkantrib'17), 13 - 15 September 2017
- XVIII. Formation of a wear-resistant oxide coating on high silicon cast iron by combining aluminizing and micro arc oxidation methods**
YÜREKTÜRK Y., MUHAFFEL F., BAYDOĞAN M.
9th International Conference on Tribology (Balkantrib'17), 13 - 15 September 2017, pp.92
- XIX. Production of a protective alumina coating on 316Ti grade stainless steel by micro arc oxidation process**
Taşlıçay C., YÜREKTÜRK Y., MUHAFFEL F., BAYDOĞAN M.
9th International Conference on Tribology (Balkantrib'17), 13 - 15 September 2017
- XX. Microstructural Characterization Of Micro Arc Oxidized Za-8 Zinc-Aluminum Alloy**
Çamlıbel B., MUHAFFEL F., YÜREKTÜRK Y., BAYDOĞAN M.
31st International Conference on Surface Modification Technologies (SMT31), 5 - 07 July 2017
- XXI. Characteristics of the Multilayer Coating Fabricated on AZ91 Alloy by Micro Arc Oxidation After Cold Spraying of Al-Cu Powder Mixture**
MUHAFFEL F., TAZEGÜL O., ÇİMENOĞLU H.
15th International Conference on Tribology (Serbiatrib'17), 17 - 19 May 2017
- XXII. Wear Characteristics of H13 Hot Work Tool Steel at Elevated Temperatures**
TEOMAN Z. C., MUHAFFEL F., ÇİMENOĞLU H.
3rd Iron Steel Symposium 2017 (UDCS'17), 3 - 05 April 2017
- XXIII. Evaluation of wear and corrosion resistances of oxide coatings formed on magnesium alloys by micro arc oxidation**

Tekin M., Taslicay C., Muhaffel F., Çimenoglu H.

International Conference on Functional Materials and Metallurgy, ICFMM 2016, Shanghai, China, 3 - 05 August 2016, pp.125-130

- XXIV. **Wear and Corrosion Resistances of Oxide Coatings formed on Magnesium Alloys by Micro Arc Oxidation**
TEKİN M., Taşlıçay C., MUHAFFEL F., ÇİMENOĞLU H.
3rd International Conference on Mechanical Properties of Materials, 14 - 17 December 2016
- XXV. **Production of a Coating Containing Ca P and Zn on AZ31 Magnesium Alloy by Micro Arc Oxidation**
DOS SANTOS A. P., MUHAFFEL F., Paksoy A. H., ÇİMENOĞLU H.
UNITECH'16, 18 - 19 November 2016
- XXVI. **Production Of A Coating Containing Ca P and Zn on AZ31 Magnesium**
Dos Santos A. P., Muhaffel F., Paksoy H., Çimenoglu H.
Unitech 2016, Gabrovo, Bulgaria, 18 - 19 November 2016
- XXVII. **Characteristic of mullite based oxide coating on in situ CuAl₂ reinforced aluminum matrix composite**
Mafouz D. I., Paksoy A. H., MUHAFFEL F., TAZEGÜL O., ÇİMENOĞLU H.
16. International Materials Symposium (IMSP'16), 12 - 14 October 2016
- XXVIII. **Microstructural investigation and wear performance of spheroidal graphite cast iron treated by a two step austempering process**
Gider G., YÜREKTÜRK Y., Paksoy A. H., MUHAFFEL F., BAYDOĞAN M.
16. International Materials Symposium (IMSP'16), 12 - 14 October 2016
- XXIX. **Effect of Single Step and Two Step Austempering on Microstructure and Mechanical Properties of a High Silicon Ductile Iron**
Gider G., YÜREKTÜRK Y., MALCIOĞLU A. U., MUHAFFEL F., BAYDOĞAN M.
International Conference on Advances in Automotive Technologies, 11 - 14 October 2016
- XXX. **CHARACTERISTIC OF MAO COATINGS FORMED ON CuAl₂ IN SITU REINFORCED ALUMINUM MATRIX COMPOSITES**
Diallo I., Paksoy H., Muhaffel F., Tazegül O., Çimenoglu H.
IMSP 2016, Denizli, Turkey, 12 - 14 October 2016
- XXXI. **Microstructural Investigation and Wear Performance of Ductile Irons Treated by Two Step Austempering Processes**
Gider G., YÜREKTÜRK Y., Paksoy A. H., MUHAFFEL F., BAYDOĞAN M.
16th International Materials Symposium IMSP'2016, 12 - 14 October 2016, pp.1118-1125
- XXXII. **Formation of a Protective Ceramic Coating on Friction Stir Welded Magnesium and Aluminum by Micro Arc Oxidation**
Karaçam E., MUHAFFEL F., Zamani M. H., Divandari M., ÇİMENOĞLU H.
30th International Conference on Surface Modification Technologies (SMT30), 29 June - 01 July 2016
- XXXIII. **Characterization of Carbon Nanotubes Incorporated Ceramic Coatings Fabricated via Micro Arc Oxidation on AZ91D Magnesium Alloy**
Kılıç D., MUHAFFEL F., YÜREKTÜRK Y., BAYDOĞAN M.
30th International Conference on Surface Modification Technologies (SMT30), 29 June - 01 July 2016
- XXXIV. **Characterization of micro arc oxidized unalloyed low carbon steel after hot dip aluminizing process**
Açıksöz M., YÜREKTÜRK Y., MUHAFFEL F., BAYDOĞAN M.
13th International Conference of Diffusion in Solid and Liquids, 26 - 30 June 2016
- XXXV. **Influence of Austempering Temperature on Microstructural and Mechanical Properties of EN GJS 500 7 and EN GJS 600 3 grades nodular cast irons**
GİDER G., YÜREKTÜRK Y., PAKSOY A. H., MUHAFFEL F., BAYDOĞAN M.
5. Isıl İşlem Sempozyumu, Turkey, 2 - 03 June 2016
- XXXVI. **Characterization and Mechanical Properties of Recovered Waste Zirconia Powders by Powder Metallurgy Technique**
Nilüfer B., Gökçe H., MUHAFFEL F., ÖVEÇOĞLU M. L., ÇİMENOĞLU H.
International Conference on Material Science and Technology, 6 - 08 April 2016

- XXXVII. **Characteristics of Ceramic Coating Fabricated by Micro Arc Oxidation on Aluminized Stainless Steel**
Taşlıçay C., YÜREKTÜRK Y., MUHAFFEL F., BAYDOĞAN M.
International Conference on Material Science and Technology, 6 - 08 April 2016
- XXXVIII. **In Situ Production and Mechanical Properties of Aluminum Matrix Aluminum Copper Intermetallic Composite**
Mafouz D. I., Paksoy A. H., TAZEGÜL O., MUHAFFEL F., ÇİMENOĞLU H.
International Conference on Material Science and Technology, 6 - 08 April 2016
- XXXIX. **Microstructure and Mechanical Properties of the Sintered Niobium Borides**
Balcı Ö., Ağaoğulları D., Muhaffel F., Ovecoglu M. L., Cimenoglu H., Duman İ.
IXth Ceramic Congress with International Participation, Afyonkarahisar, Turkey, 26 - 28 November 2015
- XL. **Microstructure and Mechanical Properties of Sintered Niobium Borides**
Ağaoğulları D., Balcı Ö., Muhaffel F., Öveçoğlu M. L., Çimenoglu H., Duman İ.
IX. Seramik Kongresi 2015, Afyonkarahisar, Turkey, 26 - 28 November 2015, pp.160
- XLI. **Tribological Investigation of Austempered Grey Cast Iron for Automotive Components under Dry Sliding Conditions**
Malcıoğlu U., Yürektürk Y., Muhaffel F., Baydoğan M.
TurkeyTrib'15, İstanbul, Turkey, 7 - 09 October 2015
- XLII. **Formation of Corrosion Resistant Alumina Coating on 6061 Aluminum Alloy by the Combination of Micro Arc Oxidation and Sealing Treatments**
Paksoy A. H., Muhaffel F., Koca M., Gökçe Ö., Mohammadzadeh S., Çimenoglu H.
23rd International Conference on Materials and Technology, Izola, Slovenia, 27 - 30 September 2015
- XLIII. **Formation of bio compatible titanium di oxide layer onto 316L stainless steel substrate**
Muhaffel F., Tazegül O., Çimenoglu H.
11th International Conference on Diffusion in Solids and Liquids, Munich, Germany, 22 - 26 June 2015
- XLIV. **Antibiotic loaded micro porous oxide coatings for titanium based biomedical implants**
Teker D., Muhaffel F., Çimenoglu H.
eCM XVI - Bone and Implant Infection, Chur, Switzerland, 24 - 26 June 2015
- XLV. **Characterization of complex coatings deposited by micro arc oxidation on Ti6Al7Nb alloy**
Karbowniczek J., Cempura G., MUHAFFEL F., ÇİMENOĞLU H., Czyrzka Filemonowicz A.
Unified Scientific Approaches Towards Regenerative Orthopaedics and Dentistry, 25 - 27 March 2015
- XLVI. **Influence of Pulse Time on the Structural and Tribological Properties of Micro Arc Oxidized AZ91D Magnesium Alloy**
Kılıç D., MUHAFFEL F., YÜREKTÜRK Y., BAYDOĞAN M.
TMS 2015 - 144th Annual Meeting & Exhibition, Orlando, United States Of America, 15 - 19 March 2015
- XLVII. **Characterization and Wear Properties of Carbon Nanotubes Incorporated Ceramic Coatings on Ti6Al4V and Ti6Al7Nb Alloys**
Yazıcı S. K., MUHAFFEL F., YÜREKTÜRK Y., BAYDOĞAN M.
IMSP 2014, 15th International Materials Symposium (IMSP'2014), 15 - 17 October 2014
- XLVIII. **Micro Arc Oxidation of AZ91 Mg Alloy in Silicate Electrolyte Effect of Electrical Parameters**
Kılıç D., MUHAFFEL F., BAYDOĞAN M.
ISTS'2014, 2nd International Surface Treatment Symposium, İstanbul, Turkey, 25 - 27 June 2014
- XLIX. **Effect of voltage parameters on surface morphology of micro arc oxidized Cp titanium**
Yazıcı S. K., Muhaffel F., Baydoğan M.
9th International Conference on Diffusion in Solids and Liquids Mass Transfer - Heat Transfer - Microstructure and Properties - Nanodiffusion and Nanostructured Materials, DSL 2013, Madrid, Spain, 24 - 28 June 2013, vol.353, pp.211-216
- L. **Heat Treated and As-Plated Electroless Duplex Ni-P/Ni-B Coatings: Evaluation of Hardness and Wear Resistance**
Dil G., Gökşenli A., Calli C., Muhaffel F., Aydeniz A. İ., Yildiz A., Yuksel B.
International Conference on Materials Science, Machinery and Energy Engineering (MSMEE 2013), Hong Kong, PEOPLES R CHINA, 24 - 25 December 2013, vol.853, pp.264-265

- LI. **Effect of Process Parameters on the Surface Properties of Micro Arc Oxidized 6082 Aluminum Alloy**
Bu bildiri Academic Journal of Science dergisinde basılmıştır Academic Journal of Science 2 2 379
384 2013
YÜREKTÜRK Y., MUHAFFEL F., BAYDOĞAN M.
International Journal of Art and Science, Prag, 28 - 31 May 2013
- LII. **Effect of annealing temperature on the corrosion resistance of electroless produced Ni-B-W coatings**
Yildiz R. A., Göksenli A., Yüksel B., Muhaffel F., Aydeniz A.
2012 International Conference on Engineering Materials, ICEM 2012, Singapore, 30 - 31 December 2012, vol.651,
pp.263-268
- LIII. **Synthesis of Hydroxyapatite Coated Antibacterial Titania Layer on Titanium Based Biomedical Alloys**
Muhaffel F., Gunyuz M., Daşkaya Dikmen C., Heperkan D., Çimenoglu H.
12th World Conference on Titanium (Ti-2011), Beijing, China, 19 - 24 June 2011, pp.2157-2159

Supported Projects

- Çimenoglu H., Kaba M., Muhaffel F., Baydoğan M., Project Supported by Higher Education Institutions, Alüminyum Alaşımlarında Sıfır Altı İşlemin Mikroyapı ve Mekanik Özelliklere Etkisinin İncelenmesi, 2024 - Continues
- Muhaffel F., XIAO P., YILMAZ E., PAKSOY A. H., Çimenoglu H., Kaba M., Project Supported by Higher Education Institutions, Zirkonya esaslı seramik kaplamaların aerosol biriktirme tekniği ile üretimi ve karakterizasyonu, 2023 - Continues
- Muhaffel F., H2020 Project, Integrated Training Network in Advanced Nano and Micro Gradient Structured Materials and Coatings Designed for Orthopedic Trauma and Dental Implants, 2014 - Continues
- Çimenoglu H., Kaba M., Muhaffel F., Baydoğan M., Project Supported by Higher Education Institutions, Mikro-ark Oksidasyon Yöntemi ile Kaplanmış Refrakter Yüksek Entropili Alaşımların Yüksek Sıcaklık Oksidasyon ve Aşınma Davranışlarının İncelenmesi, 2021 - 2024
- Muhaffel F., Çimenoglu H., Kaba M., Baydoğan M., Project Supported by Higher Education Institutions, Mikro Ark Oksidasyon ve Hidrotermal İşlemleri ile Biyolojik Uygulamalara Yönelik Olarak Biyomedikal Titanyum Alaşımlarının Yüzey Modifikasyonu, 2021 - 2024
- Baydoğan N., Kızılcan N., Muhaffel F., Ürper O., Project Supported by Higher Education Institutions, POLİMER NANOKOMPOZİTLERDE MEKANİK ÖZELLİKLERİN İNCELENMESİ, 2018 - 2022
- Çimenoglu H., CENGİZ S., Muhaffel F., Çetiner D., Kaba M., Project Supported by Higher Education Institutions, Alüminyum Matrisli AlAl₂Ce Kompozitlerin Hazırlanması ve Plasma Elektrolitik Oksidasyon Yöntemiyle Kaplanması, 2019 - 2021
- Muhaffel F., Çimenoglu H., Project Supported by Higher Education Institutions, Titanyum Alaşımları Üzerinde Oluşturulan Oksit Kaplamaların Korozyonlu Yorulma ve Yüksek Sıcaklık Aşınma Davranışlarının İncelenmesi, 2015 - 2018
- Muhaffel F., Project Supported by Other Official Institutions, İTÜ Partikül Malzemeler ve Karakterizasyon Laboratuvar Olanakları İle İlişkin Endüstriyel Faaliyetler, 2013 - 2014
- Muhaffel F., Çimenoglu H., TÜBİTAK - AB COST Project, Biyomedikal Uygulamalar için Titanyum ve Alaşımlarının Yüzeyinde Biyoaktif Antibakteriyel ve Mikroporöz Oksit Tabakasının Oluşturulması, 2012 - 2014
- Muhaffel F., TÜBİTAK Project, Ortopedik İmplantların Yüzey Özelliklerinin Geliştirilmesi, 2010 - 2011

Patent

- Muhaffel F., Bir kaplama yöntemi ve bu yöntemle kaplanmış bir implant, Patent, CHAPTER A Human Needs, The Invention Registration Number: 2013 11246 , Standard Registration, 2015
- Çimenoglu H., Muhaffel F., Magnezyum ve alaşımlarının düşük sıcaklıkta alümina kaplanması yöntemi, Patent, CHAPTER C Chemistry; Metallurgy, The Invention Registration Number: 2012 09392 , Standard Registration, 2015

Activities in Scientific Journals

Scientific Refereeing

SURFACE AND COATINGS TECHNOLOGY, SCI Journal, March 2023
INDIAN JOURNAL OF SCIENCE AND TECHNOLOGY, Other Indexed Journal, September 2021
ADVANCES IN TRIBOLOGY, Journal Indexed in ESCI, September 2021
TRANSACTIONS OF THE INDIAN INSTITUTE OF METALS, SCI Journal, September 2021
MATERIALS & DESIGN, SCI Journal, May 2019
JOURNAL OF MATERIALS ENGINEERING AND PERFORMANCE, SCI Journal, June 2018
MATERIALS LETTERS, SCI Journal, April 2018
JOURNAL OF ALLOYS AND COMPOUNDS, SCI Journal, February 2018
RARE METALS, SCI Journal, September 2017
INTERNATIONAL JOURNAL OF ORAL SCIENCE, SCI Journal, August 2017
APPLIED SURFACE SCIENCE, SCI Journal, March 2017

Mobility Activity

Post Doc, Post Doc, The University of Manchester, England, 2022 - 2023
Improving Competencies and Qualifications, Scientific Research, AGH University of Science and Technology, Poland, 2019 - 2019

Metrics

Publication: 104
Citation (WoS): 644
Citation (Scopus): 733
H-Index (WoS): 17
H-Index (Scopus): 17

Scholarships

2219, TUBITAK, 2022 - 2023
2211 - A Genel Yurt İçi Doktora Bursu, TUBITAK, 2010 - 2015
2210 - Yurt İçi Yüksek Lisans Bursu, TUBITAK, 2008 - 2010

Awards

Muhaffel F., Üstün Başarılı Genç Bilim İnsanı Ödülü, Türkiye Bilimler Akademisi, December 2023
Muhaffel F., 2021 Yılı En İyi Doktora Tez Ödülü, İstanbul Teknik Üniversitesi, June 2022
Muhaffel F., The Best Young Researcher Award, 1St International Symposium On Light Alloys And Composite Materials (Islac'18) Committee, March 2018
Muhaffel F., Çimenoğlu H., Baydoğan M., Horizon 2020 Projesi Değerlendirme Raporu Eşik Üstü Ödülü, Tübitak, May 2015