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Education

Postgraduate, Dokuz Eylul University, Mühendislik Fakültesi, Metalurji Ve Malzeme Mühendisliği Bölümü, Turkey 2013 - 2016

Undergraduate, Dokuz Eylul University, Mühendislik Fakültesi, Metalurji Ve Malzeme Mühendisliği Bölümü, Turkey 2008 - 2013

Biography

2016 yılında Marmara Üniversitesi'nde araştırma görevlisi olarak Mühendislik Fakültesi Metalurji ve Malzeme Mühendisliği Üretim Metalurjisi A.B.D.'nda çalışmaya başladı. Aynı yıl aynı bölümde Fen Bilimleri Enstitüsü'nde doktora başladı. Halen doktora ve araştırma görevlisi olarak ilgili bölümde çalışmaya devam etmektedir.

Foreign Languages

English, C1 Advanced

Dissertations

Postgraduate, Production of Y(Ta,Nb)O₄ Based Implant Dosimetries and Its Development and Application in the Radiotherapy, Dokuz Eylül Üniversitesi, Mühendislik Fakültesi, Metalurji Ve Malzeme Mühendisliği Bölümü, 2016

Research Areas

Metallurgical and Materials Engineering

Journal articles indexed in SCI, SSCI, and AHCI

- Design of the amorphous/crystalline TiO₂ nanocomposites via machine learning for photocatalytic applications**
DEMİRCİ S., Şahin D. Ö., Demirci S.
Materials Science in Semiconductor Processing, vol.192, 2025 (SCI-Expanded)

- II. **Optimizing Boride Coating Thickness on Steel Surfaces Through Machine Learning: Development, Validation, and Experimental Insights**
DEMİRCİ S., Şahin D. Ö., Demirci S., Gümüş A., TÜNÇAY M. M.
Applied Sciences (Switzerland), vol.15, no.5, 2025 (SCI-Expanded)
- III. **Growth kinetics of the borided 316L stainless steel obtained by selective laser 选择性激光熔化制备硼化316L 不锈钢的生长动力学**
DEMİRCİ S., TÜNÇAY M. M.
Journal of Central South University, 2025 (SCI-Expanded)
- IV. **Surface engineering of additively manufactured Ti-6Al-4V alloys: A comparative study on micro/nanoscale topographies for biomedical applications**
DEMİRCİ S., TÜNÇAY M. M.
Materials Today Communications, vol.42, 2025 (SCI-Expanded)
- V. **Nanoindentation and Corrosion Behavior of Additively Manufactured Ti-6Al-4V Alloy for Biomaterial Applications**
DEMİRCİ S., DİKİCİ T., DALMIŞ R.
Journal of Materials Engineering and Performance, vol.33, no.5, pp.2133-2145, 2024 (SCI-Expanded)
- VI. **Non-isothermal Kinetic Analysis of High Temperature Oxidation of Additively Manufactured Ti-6Al-4V Alloy**
DEMİRCİ S., KIRAN YILDIRIM B., TÜNÇAY M. M., Kaya N., DİKİCİ T.
Journal of Materials Engineering and Performance, 2024 (SCI-Expanded)
- VII. **Production of Zn-doped TiO₂ film with enhanced photocatalytic activity**
DİKİCİ T., YILMAZ O., Akalin A., DEMİRCİ S., GÜLTEKİN S., YILDIRIM S., YURDDAŞKAL M.
JOURNAL OF THE AUSTRALIAN CERAMIC SOCIETY, vol.58, no.5, pp.1415-1421, 2022 (SCI-Expanded)
- VIII. **Investigation of surface-modified EBM printed Ti-6Al-4V alloys for biomedical applications**
DEMİRCİ S., DİKİCİ T., TÜNÇAY M. M., DALMIŞ R., KAYA N., Kanbur K., Sargin F., GÜLLÜOĞLU A. N.
SURFACES AND INTERFACES, vol.34, 2022 (SCI-Expanded)
- IX. **Micro/Nanoscale Surface Modification of Ti6Al4V Alloy for Implant Applications**
DEMİRCİ S., DİKİCİ T., GÜLLÜOĞLU A. N.
JOURNAL OF MATERIALS ENGINEERING AND PERFORMANCE, vol.31, no.2, pp.1503-1511, 2022 (SCI-Expanded)
- X. **Influence of electrolyte composition on the microstructure and photocatalytic activity of TiO₂ nanostructures**
YILMAZ O., Ebeoğlu F., DEMİRCİ S., DİKİCİ T.
JOURNAL OF THE AUSTRALIAN CERAMIC SOCIETY, vol.58, no.1, pp.123-133, 2022 (SCI-Expanded)
- XI. **Effect of surface modifications of additively manufactured Ti-6Al-4V alloys on apatite formation ability for biomedical applications**
DEMİRCİ S., DALMIŞ R., DİKİCİ T., TÜNÇAY M. M., KAYA N., GÜLLÜOĞLU A. N.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.887, 2021 (SCI-Expanded)
- XII. **Photocatalytic activity of the thermally oxidized Zn-Ni-, Zn-Co-, Ni-Co-, and Zn-Ni-Co-coated alloy films**
DEMİRCİ S., DİKİCİ T., YURDDAŞKAL M.
JOURNAL OF THE AUSTRALIAN CERAMIC SOCIETY, vol.57, no.5, pp.1531-1539, 2021 (SCI-Expanded)
- XIII. **Synthesis, characterization, thermal, and antibacterial activity studies on MgO powders**
DEMİRCİ S., Yildirim B., TÜNÇAY M. M., KAYA N., GÜLLÜOĞLU A. N.
JOURNAL OF SOL-GEL SCIENCE AND TECHNOLOGY, vol.99, no.3, pp.576-588, 2021 (SCI-Expanded)
- XIV. **Effect of heating rate on structure, morphology and photocatalytic properties of TiO₂ particles: thermal kinetic and thermodynamic studies**
Dikici T., Demirci S., Tünçay M. M., Kiran Yıldırım B., Kaya N.
JOURNAL OF SOL-GEL SCIENCE AND TECHNOLOGY, vol.97, no.3, pp.622-637, 2021 (SCI-Expanded)
- XV. **A study of heating rate effect on the photocatalytic performances of ZnO powders prepared by sol-gel route: Their kinetic and thermodynamic studies**
DEMİRCİ S., Dikici T., TÜNÇAY M. M., KAYA N.

APPLIED SURFACE SCIENCE, vol.507, 2020 (SCI-Expanded)

- XVI. **Influence of thermal oxidation temperature on the microstructure and photoelectrochemical properties of ZnO nanostructures fabricated on the zinc scraps**
Dikici T., Demirci S.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.779, pp.752-761, 2019 (SCI-Expanded)
- XVII. **Fabrication and characterization of novel iodine doped hollow and mesoporous hematite (Fe₂O₃) particles derived from sol-gel method and their photocatalytic performances**
DEMİRCİ S., YURDDAŞKAL M., Dikici T., Sanoglu C.
JOURNAL OF HAZARDOUS MATERIALS, vol.345, pp.27-37, 2018 (SCI-Expanded)
- XVIII. **The effects of growth conditions on the surface properties and photocatalytic activities of anatase TiO₂ films prepared via electrochemical anodizing and annealing methods**
Dikici T., YURDDAŞKAL M., DEMİRCİ S., ÇELİK E.
JOURNAL OF POROUS MATERIALS, vol.24, no.6, pp.1535-1544, 2017 (SCI-Expanded)
- XIX. **High temperature thermopower of sol-gel processed Zn_{1-x-y}Al(x)Me(y)O (Me: Ga, In)**
KILINÇ E., DEMİRCİ S., UYSAL F., ÇELİK E., KURT H.
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.28, no.16, pp.11769-11778, 2017 (SCI-Expanded)
- XX. **Fast and low-cost fabrication of 1D hematite photoanode in pure water vapor and air atmosphere: Investigation the effect of the oxidation atmosphere on the PEC performance of the hematite photoanodes**
DEMİRCİ S., SARIOĞLU C.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.42, no.16, pp.11139-11149, 2017 (SCI-Expanded)
- XXI. **Production, characterization, and luminescent properties of Eu³⁺ doped yttrium niobate-tantalate films**
YILDIRIM S., DEMİRCİ S., ERTEKİN K., ÇELİK E., Alicikus Z. A.
JOURNAL OF ADVANCED CERAMICS, vol.6, no.1, pp.33-42, 2017 (SCI-Expanded)
- XXII. **Enhanced photocatalytic activity of micro/nano textured TiO₂ surfaces prepared by sandblasting/acid-etching/anodizing process**
Dikici T., DEMİRCİ S., EROL M.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.694, pp.246-252, 2017 (SCI-Expanded)
- XXIII. **Synthesis and characterization of Ag doped TiO₂ heterojunction films and their photocatalytic performances**
DEMİRCİ S., Dikici T., YURDDAŞKAL M., Gultekin S., TOPARLI M., ÇELİK E.
APPLIED SURFACE SCIENCE, vol.390, pp.591-601, 2016 (SCI-Expanded)
- XXIV. **Sol-gel synthesized Sr₄Al₁₄O₂₅:Eu²⁺/Dy³⁺ blue-green phosphorous as oxygen sensing materials**
AYDIN İ., ERTEKİN K., DEMİRCİ S., GÜLTEKİN S., ÇELİK E.
OPTICAL MATERIALS, vol.62, pp.285-296, 2016 (SCI-Expanded)
- XXV. **Synthesis and comparison of the photocatalytic activities of flame spray pyrolysis and sol-gel derived magnesium oxide nano-scale particles**
DEMİRCİ S., Ozturk B., Yildirim S., Bakal F., Erol M., Sancakoglu O., Yigit R., Celik E., Batar T.
MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING, vol.34, pp.154-161, 2015 (SCI-Expanded)
- XXVI. **Synthesis and spectral characterization of Sr₄Al₁₄O₂₅:Eu²⁺/Dy³⁺ blue-green phosphorous powders by sol-gel method**
Demirci S., Gültekin S., Akalın S. A., Öter Ö., Ertekin K., Çelik E.
MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING, vol.31, pp.611-617, 2015 (SCI-Expanded)

Papers Presented at Peer-Reviewed Scientific Conferences

- I. **PRODUCTION AND CHARACTERIZATION OF BIOGLASS-YIG CERAMIC COMPOSITE**
DEMİRCİ S., ÇINAR Ö., ÇETİNER B. N., TUNÇAY M. M., GÜLLÜOĞLU A. N.

6. ULUSLARARASI MUHENDİSLİK MİMARLIK VE TASARIM KONGRESİ, İstanbul, Turkey, 17 - 18 December 2020, (Summary Text)

- II. **Investigation of Effects of Post-annealing Atmosphere and Temperature on Structural and Photo-electrochemical Properties on Electrodeposited SnS Photo-electrode**
Soyöz S., DEMİRCİ S., SARIOĞLU C.
Proceedings of the 4th International Hydrogen Technologies Congress, 20 - 24 May 2019, (Full Text)
- III. **Boosting Optical Performance of polymer embedded phosphors using iodine-free and iodine-decorated sol-gel synthesized Fe₂O₃**,
Yıldırım B., ERTEKİN K., DEMİRCİ S., GÜLTEKİN S., ÇELİK E.
4th NANOSCIENCE AND NANOTECHNOLOGY CONFERENCE, İzmir, Turkey, 22 September 2018 - 24 September 2020, (Summary Text)
- IV. **EFFECT OF THERMAL OXIDATION ATMOSPHERE ON PHOTOELECTROCHEMICAL (PEC) WATER SPLITTING OF HEMATITE PRODUCED FROM ELECTRODEPOSITED Fe FILM**
DEMİRCİ S., TÜNÇAY M. M., DİKİCİ T., SARIOĞLU C.
19th International Metallurgy and Materials Congress, 25 - 27 October 2018, (Full Text)
- V. **Photocatalytic performance of the iodine doped hollow and mesoporous hematite (Fe₂O₃) structure synthesized via sol-gel process**
DEMİRCİ S., YURDDAŞKAL M., DİKİCİ T., SARIOĞLU C.
3rd International Porous and Powder Materials Symposium and Exhibition (PPM), Aydın, Turkey, 12 - 15 September 2017, (Summary Text)
- VI. **Investigation the effect of annealing atmosphere and time on photoelectrochemical (PEC) properties of α-Fe₂O₃ photoanode**
DEMİRCİ S., SARIOĞLU C.
2nd International Hydrogen Technologies Congress, Adana, Turkey, 15 - 18 March 2017, (Summary Text)
- VII. **Thermoelectric Module using p and n type Oxide Thermoelectric Materials**
KILINÇ E., DEMİRCİ S., UYSAL F., ÇELİK E., KURT H.
3rd International Symposium on Innovative Technologies in Engineering and Science, Valensiya, Spain, 3 - 05 June 2015, (Full Text)
- VIII. **Effect of electrolyte concentration on the surface properties of nanoporous TiO₂ layers formed on micro roughened titanium**
DİKİCİ T., DEMİRCİ S., TOPARLI M.
Advances in Materials & Processing Technology Conference (AMPT), Dubai, United Arab Emirates, 17 - 20 November 2014, (Full Text)
- IX. **PRODUCTION AND DEVELOPMENT OF MONOCLINIC YTTRIUM TANTALATE M YTaO₄ X RAY PHOSPHOR VIA SOL GEL TECHNIQUE**
YILDIRIM S., DEMİRCİ S., MERMER Ö., TOPARLI M., ARICAN ALİCİKÜŞ L. Z., AKMAN F., ÇELİK E.
International Conference on Production Research - Regional Conference Africa, Europe and the Middle East (ICPR-AEM) / 3rd International Conference on Quality and Innovation in Engineering and Management (QIEM), Cluj-Napoca, Romania, 1 - 05 July 2014, pp.454-456, (Summary Text)

Metrics

Publication: 35

Citation (WoS): 315

Citation (Scopus): 340

H-Index (WoS): 10

H-Index (Scopus): 10