Assoc. Prof. AHU ÇELEBİ

Personal Information

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Education

Doctorate, Anadolu University, Fen Bilimleri Enstitüsü, Turkey 2007 - 2015
Undergraduate, Sakarya University, Turkey 2000 - 2004

Foreign Languages

English

Dissertations

Doctorate, Deney tasarımı yöntemi kullanılarak oksit oranlarının yer karosu özelliklerine etkisinin incelenmesi, Anadolu University, Fen Bilimleri Enstitüsü, 2015

Academic Positions

Manisa Celal Bayar University, 2015 - Present

Courses

Undergraduate
Toz Metalurjisi, Undergraduate, 2021-2022, 2020-2021, 2019-2020, 2016-2017, 2015-2016
Fiziksel Metalurji, Undergraduate, 2021-2022, 2020-2021, 2019-2020
Döküm Prensipleri ve Teknolojisi, Undergraduate, 2021-2022, 2020-2021, 2019-2020
Malzeme Mühendisliği Tasarımı I, Undergraduate, 2019-2020
Malzeme Mühendisligi Uygulamaları, Undergraduate, 2019-2020
Seramik Malzemeler, Undergraduate, 2017-2018, 2016-2017
ÜRETİM METALURJİSİ, Undergraduate, 2017-2018, 2015-2016
Malzeme Bilimi, Undergraduate, 2016-2017
Undergraduate Double Major
Eklemeli İmalat Teknolojileri, Undergraduate Double Major, 2019-2020
Seramik Malzemelerin Üretim Süreçleri, Undergraduate Double Major, 2016-2017

Supervised Theses

ÇELEBİ A., Eklemeli İmalat Yöntemi Kullanılarak Manyetik Uyarıcılı Şekil Hafızalı Polimerden Biyomalzeme Üretimi ve Karakterizasyonu, Doctorate, B.RAHMAN(Student), 2024
Çelebi A., Türkmen İ., Characterization of inconel 718 superalloy produced by powder bed laser melting after boriding, Postgraduate, U.MOGAN(Student), 2023
ÇELEBİ A., FDM Tipi 3 Boyutlu Yazıcı ile Üretilen Karbon Fiber/PLA Kompozit Öksetik Yapıların Isıl İşlem ile Mekanik Özelliklerinin Geliştirilmesi, Postgraduate, S.MUTAF(Student), 2022
ÇELEBİ A., Katmanlı imalat yöntemi ve talaşlı imalat yöntemi için optimizasyon yöntemlerinin denenmesi ve karşılaştırılması, Postgraduate, H.TOSUN(Student), 2021

Articles

I. **Filament-Level Thermal, Structural, Mechanical, and Shape-Memory Characterization of PLA/Fe3O4 Composite Feedstocks for Magnetically Responsive FDM**
Rahman B., BARDAK C., Celebi A., Behvar A., Elahinia M.
Shape Memory and Superelasticity, vol.12, no.3, pp.628-643, 2026 (ESCI, Scopus)

II. **Hydrogen embrittlement of additively manufactured NiTi shape memory alloys: Review on interactions between microstructure and mechanical properties**
Behvar A., Khorasani M. B., Mohajerani S., Algamal A., Sojoodi M., Bajaj H., Vanaei S., Taheri N., Celebi A., Mahtabi M. J., et al.
PROGRESS IN MATERIALS SCIENCE, vol.159, 2026 (SCI-Expanded, Scopus)

III. **Influence of hydrogen on hydrogen embrittlement, superelasticity, and thermal hysteresis of additive manufactured NiTi shape memory alloy**
Behvar A., Vanaei S., Andani N. T., Bajaj H., Sojoodi M., Celebi A., Dabbaghi H., Djukic M. B., Elahinia M.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.230, 2026 (SCI-Expanded, Scopus)

IV. **Sinter-based additive manufacturing of NiTiHf shape memory alloys: a comprehensive review of binder jetting approaches, challenges, and prospects**
Kanakaratne V., Behvar A., Baffour F. A., Bajaj H., Algamal A., Celebi A., Elahinia M.
SMART MATERIALS AND STRUCTURES, vol.35, no.4, 2026 (SCI-Expanded, Scopus)

V. **Sustainable Pathways in Powder Reuse: A Comparative Study of Virgin, Reused, and Ultrasonic-Atomization-Recycled NiTi Powder for Additive Manufacturing**
Bajaj H. K., Sojoodi M., Asare Baffour F. Y., Hesami M., Houshmand S., De Silva Kanakaratne V. R., Celebi A., Elahinia M.
SUSTAINABILITY, vol.18, no.4, 2026 (SCI-Expanded, SSCI, Scopus)

VI. **Advancing Scoliosis Treatment with Patient-Specific Functionally Graded NiTi-SMA Rods: Key Considerations and Development Objectives**
Mohajerani S., Behvar A., Jalalian A., Celebi A., Elahinia M.
BIOENGINEERING-BASEL, vol.13, no.2, 2026 (SCI-Expanded, Scopus)

VII. **Impact of ultrasonic vibration frequency on the quality of produced NiTi and NiTi-20Hf powders for additive manufacturing applications**
Sojoodi M., Behvar A., ÇELEBİ A., Andani N. T., Pourshams M., Elahinia M.
ADVANCED POWDER TECHNOLOGY, vol.36, no.8, 2025 (SCI-Expanded, Scopus)

VIII. **Experimental and Statistical Investigation of the Bending and Surface Roughness Properties on Three-Dimensional Printing Parts**
ÇELEBİ A.
Journal of Testing and Evaluation, vol.50, no.4, 2022 (SCI-Expanded, Scopus)

IX. **APPLICATION AND COMPARISON OF TOPOLOGY OPTIMIZATION FOR ADDITIVE MANUFACTURING AND MACHINING METHODS**
ÇELEBİ A., Tosun H.

International Journal of 3D Printing Technologies and Digital Industry, vol.5, no.3, pp.676-691, 2021 (TRDizin)

X. **CORROSION BEHAVIOR OF ALSI10MG ALLOY PRODUCED BY SELECTIVE LASER MELTING (SLM) AND CASTING METHOD DEPENDING ON HEAT TREATMENT**
ÇELEBİ A.
JOURNAL OF MATERIALS EDUCATION, vol.43, no.5-6, pp.153-164, 2021 (SCI-Expanded)

XI. **ENDÜSTRİ 4.0 ÇERÇEVESİNDE KATMANLI İMALATTA SENSÖR UYGULAMALARI**
ÇELEBİ A., Koda Y.
International Journal of 3D Printing Technologies and Digital Industry, vol.5, no.1, 2021 (TRDizin)

XII. **Deformation and Microstructural Analysis of Fiber Laser and TIG Welding of Thin Ti6Al4V Sheet by Coordinate Measurement Machine (CMM)**
ÇELEBİ A.
JOURNAL OF POLYTECHNIC-POLITEKNIK DERGISI, vol.23, no.4, pp.1183-1188, 2020 (ESCI, TRDizin)

XIII. **Characterization of Tantalum-Titanium Powders with Universal Powder Bed (UPB) System for Electron Beam Melting Process**
Ahu Celebi C., Gulizia S., Doblin C., Fraser D., Prentice L.
RUSSIAN JOURNAL OF NON-FERROUS METALS, vol.61, no.3, pp.346-353, 2020 (SCI-Expanded, Scopus)

XIV. **An Investigation of the Deformation Patterns Due to the High-Speed Micro-Laser Drilling Process for Ti-6Al-4V Used in Aerospace Applications**
ÇELEBİ A., Tosun H., ÖNÇAĞ A. Ç.
ACADEMIC PLATFORM-JOURNAL OF ENGINEERING AND SCIENCE, vol.8, no.2, pp.316-325, 2020 (TRDizin)

XV. **3 BOYUTLU YAZICI İLE 6 EKSENLİ ROBOT KOL TASARIM VE İMALATI**
ÇELEBİ A., Tosun H., Yılmaz T., Korkmaz A.
International Journal of 3D Printing Technologies and Digital Industry, vol.3, no.3, pp.269-278, 2019 (Peer-Reviewed Journal)

XVI. **KATMANLI İMALATTA DESTEK YAPISININ VE KONUMLANDIRMANIN ÇARPILMA ÜZERİNE ETKİSİNİN SİMUFACT ADDİTİVE YAZILIMI İLE SİMÜLASYONU**
ÇELEBİ A., Seziş G.
International Journal of 3D Printing Technologies and Digital Industry, vol.3, no.2, pp.182-188, 2019 (Peer-Reviewed Journal)

XVII. **Investigation of fused deposition modeling processing parameters of 3D PLA specimens by an experimental design methodology**
ÇELEBİ A.
Materialpruefung/Materials Testing, vol.61, no.5, pp.405-410, 2019 (SCI-Expanded, Scopus)

XVIII. **Analysing the Effect of Voxel Mesh and Surface Mesh Application on Residual Stress by Simufact Additive Software**
ÇELEBİ A., Appavuravther E. Z.
Düzce Üniversitesi Bilim ve Teknoloji Dergisi, vol.6, no.4, pp.930-940, 2018 (TRDizin)

XIX. **Study On The Effects OfSeveral Surface Treathments By Smoothness An Strenght On The Prototypes Produced By Fdm Technology**
MADEN H., Çelebi A., Kamber Ö. Ş., APPAVURAVTHER E. Z.
Düzce Üniversitesi Bilim ve Teknoloji Dergisi, vol.6, no.4, pp.916-929, 2018 (TRDizin)

XX. **Analyzing the Effect of Voxel-Based Surface Mesh Application on Residual Stress with Simufact Additive Software**
Çelebi A., APPAVURAVTHER E. Z.
Düzce Üniversitesi Bilim ve Teknoloji Dergisi, vol.6, no.4, pp.930-940, 2018 (TRDizin)

XXI. **Manufacturing a Damaged Skull with 3 D Printer and Implant Design**
ÇELEBİ A., Tosun H.
International Journal of 3D Printing Technologies and Digital Industry, vol.1, no.1, pp.27-35, 2017 (Peer-Reviewed Journal)

XXII. **Investigation of the Strength of Floor Tiles by Using An Experimental Design Method**
ÇELEBİ A., Arslan G.

JOURNAL OF THE AUSTRALIAN CERAMIC SOCIETY, vol.51, no.2, pp.144-148, 2015 (SCI-Expanded, Scopus)

Books

I. **Characterization of CoCrFeMnNiW High Entropy Alloy Using Computational Material Engineering Technologies**
ÇELEBİ A., Balkan M., Cigin C., Akyildiz Y.
in: Springer Tracts in Additive Manufacturing, Springer Nature, pp.417-429, 2025

Papers Presented at Peer-Reviewed Scientific Conferences

I. **Future Possibilities of Using Additive Manufacturing to Produce Shape Memory Metals in Embedded Systems and Actuators**
Elahinia M., Behvar A., Mohejerani S., Gamal A. A., Sojoodi M., Celebi A.
1st IEEE Secure and Trustworthy Cyberinfrastructure for IoT and Microelectronics, SATC 2025, Ohio, United States Of America, 25 - 27 February 2025, (Full Text)

II. **COMPARISON OF OPTIMIZATION METHODS FOR ADDITIVE MANUFACTURING AND MACHINING METHODS**
ÇELEBİ A., ÖNÇAĞ A. Ç., Tosun H.
5th International Congress on 3D Printing (Additive Manufacturing) Technologies and Digital Industry 2021, Turkey, 03 June 2021, (Full Text)

III. **The Effect of Silicon Carbide (SiC) Reinforcement Element on Mechanical Properties in Iron-Based Powder Metal Composites**
YILDIRIM M., ÇELEBİ A.
Hezarfen International Science, Mathematics and Engineering Sciences Congress, İzmir, Turkey, 08 November 2019, (Full Text)

IV. **Evaluation of Tantalum Alloy with Titanium in Universal Powder Bed System (UPB) for Electron Beam Melting Process**
ÇELEBİ A., Gulizia S., Doblin C., Fraser D., Printice L.
AMC TURKEY, 17 - 19 October 2019, (Full Text)

V. **Characterization and Electron Beam Melting of Blended Elemental Titanium and Tantalum Powders**
ÇELEBİ A., Gulizia S., Doblin C., Fraser D., Printice L.
PMTi2019: Powder Metallurgy and Additive Manufacturing of Titanium, 18 - 25 September 2019, (Summary Text)

VI. **Electron Beam Melting Process of Tantalum and Titanium Alloy: Microstructure and Mechanical Properties**
ÇELEBİ A., Gulizia S., Doblin C., Fraser D., Printice L.
The 10th Pacific Rim International Conference on Advanced Materials and Processing (PRICM10), 18 - 22 August 2019, (Summary Text)

VII. **Characterization of Stuck Ti-6Al-4V PREP Powders for Additive Manufacturing**
ÇELEBİ A.
6th Conference of the Combined Australian Materials Societies incorporating Materials Australia and the Australian Ceramic Society (CAMS 2018), 27 - 29 November 2018, (Summary Text)

VIII. **Katmanlı İmalatta Destek Yapısının Kalıntı Gerilme Üzerine Etkisinin Simufact Additive Yazılımı ile Simülasyonu**
ÇELEBİ A., Seziş G.
3rd International Congress on 3D Printing (Additive Manufacturing) Technologies and Digital Industry, 11 - 15 April 2018, (Full Text)

IX. **Polylaktikasit (Pla) Numunelerde 3 Boyutlu Yazıcı Parametrelerinin Mekanik Özelliklere Etkisi**
ÇELEBİ A., Tosun H.

3rd International Congress on 3D Printing (Additive Manufacturing) Technologies and Digital Industry, 11 - 15 April 2018, (Full Text)

X. **USABILITY OF THE MIDDLE BLACK SEA REGION BASALTIC PUMICE IN PORCELAIN TILES PRODUCTION AND CHARACTERIZATION**
ÇETİN S., CENGİZ Ö., ÇELEBİ A.
International Conference on Engineering Technologies (ICENTE'17), Konya, Turkey, 7 - 09 December 2017, pp.87, (Summary Text)

XI. **SINTERED GLASS CERAMICS COMPOSITES FROM LOW COST MATERIALS**
ÇETİN S., CENGİZ Ö., ÇELEBİ A.
International Conference on Engineering Technologies (ICENTE'17), Konya, Turkey, 7 - 09 December 2017, pp.88, (Summary Text)

XII. **Study on the Flow Properties and Microstructural Characterization of Re-used Ti-6Al-4V Powders for Additive Manufacturing**
ÇELEBİ A.
1st Asia-Pacific International Conference on Additive Manufacturing, 4 - 06 December 2017, (Summary Text)

XIII. **Kişiye Özel İmplant Tasarımında 3 Boyutlu Yazıcıların Kullanımı**
ÇELEBİ A., ÇETİN S., Tosun H.
19.ULUSLARARASI KATILIMLI ULUSAL BİYOTEKNOLOJİ KONGRESİ, Eskişehir, Turkey, 1 - 03 December 2017, pp.5, (Summary Text)

XIV. **INFLUENCE of FILL RATES on THE MECHANICAL PROPERTIES of POLY LACTIC ACID (PLA) SPECIMEN PRODUCED by 3D PRINTING**
ÇELEBİ A., Demirdal S., Akbulut M.
The 2nd INTERNATIONAL SYMPOSIUM ON 3D PRINTING TECHNOLOGIES, 3 - 04 April 2017, (Full Text)

XV. **Rapid Solidification of Ti6Al4V Alloy Powder Produced by PREP Technique**
YAMANOĞLU R., ÇELEBİ A.
PM Titanium 2015, 31 August - 03 September 2015, (Full Text)

Funded Projects

ÇELEBİ A., mogan u., kıraç m., Project Supported by Higher Education Institutions, BAP Research Project, Savunma ve Havacılık Uygulamaları İçin Kullanılan Inconel 718 Alaşımının Eklemeli İmalat Sonrası Isıl İşlem Optimizasyonu, 2024 - 2025

ÇELEBİ A., KAYA E. İ., YÜCE H., Project Supported by Higher Education Institutions, BAP Other, Sla Yöntemi İle Üretilen Öksetik Tasarımların Kürleme Sürelerinin Analiz Edilmesi, 2023 - 2024

ÇELEBİ A., Project Supported by Higher Education Institutions, AlSi11Mg alaşımlarının katmanlı imalat üretimi sonrası korozyon davranışlarının incelenmesi, 2020 - 2021

ÇELEBİ A., Project Supported by Higher Education Institutions, BAP Other, Alsi10mg Alaşımının Seçici Lazer Sinterleme Yöntemi İle Üretilerek Mikroyapı ve Mekanik Özelliklerinin Geleneksel Yöntem İle Karşılaştırılması, 2020 - 2021

ÇELEBİ A., Gulizia S., Project Supported by Other Private Institutions, Katmanlı imalat proseslerinde Ta alaşımının savunma sanayiinde kullanımının araştırılması, 2018 - 2019

ÇELEBİ A., Project Supported by Higher Education Institutions, : Demir Esaslı Toz Metal Kompozitlerde Silisyum Karbür (SiC) Takviye Elemanının Mekanik Özelliklere Etkisi, 2017 - 2019

ÇELEBİ A., YILDIRIM M., Project Supported by Higher Education Institutions, BAP MSc, Demir Esaslı Toz Metal Kompozitlerde Silisyum Karbür (Sic) Takviye Elemanının Mekanik Özelliklere Etkisi, 2017 - 2019

ÇELEBİ A., CB Strateji ve Bütçe Başkanlığı (Kalkınma Bakanlığı) Projesi, Zirai İlaçlamada Membranlı Pompa Tasarımı ve İmalatı, 2016 - 2017

ÇELEBİ A., Dönen İlaçlama Makinası Şanzımanı Tasarımı ve İmalatı, 2016 - 2017

ÇELEBİ A., Project Supported by Other Official Institutions, ÇOK KATMANLI İLERİ İMALAT YÖNTEMLERİ İÇİN TİTANYUM TOZ ALAŞIMLARININ ÜRETİLMESİ, 2015 - 2017

ÇELEBİ A., TUBITAK Project, Yer Karolarında Hızlı Pişirim, 2010 - 2012

ÇELEBİ A., Project Supported by Higher Education Institutions, Yer Karolarında Hızlı Pişirim, 2009 - 2011

Peer Reviews in Scientific Publications

Other journals, January 2017

Metrics

Publication: 40
Citation (WoS): 31
Citation (Scopus): 49
H-Index (WoS): 3
H-Index (Scopus): 4

Non Academic Experience

FMA Biomedikal, Kurucu Ortak
Commonwealth Scientific and Industrial Research Organisation (CSIRO), Visiting Scientist
Akel Proje Danışmanlık, Kurucu Ortak
Uğurlu Dişçilik, Arge Koordinatörü
Uşak Seramik A.Ş., Arge Personeli