

## Asst. Prof. SERHAT ACAR

### Personal Information

**Email:** seacar@yildiz.edu.tr

**Other Email:** serhatacar63@hotmail.com

**Web:** <https://avesis.yildiz.edu.tr/seacar>

### International Researcher IDs

ScholarID: N1Iez7kAAAAJ

ORCID: 0000-0003-1732-4995

Publons / Web Of Science ResearcherID: JAX-3419-2023

ScopusID: 57200854978

Yoksis Researcher ID: 41395

### Education Information

Doctorate, Yildiz Technical University, Graduate School Of Natural And Applied Sciences, Metalurji Ve Malzeme Mühendisliği, Turkey 2016 - 2023

Postgraduate, Yildiz Technical University, Graduate School Of Natural And Applied Sciences, Metalurji Ve Malzeme Mühendisliği, Turkey 2013 - 2016

Undergraduate, Yildiz Technical University, Kimya Metalurji Fakültesi, Biyomühendislik, Turkey 2009 - 2013

### Dissertations

Doctorate, Alüminyum dövme alaşımlarının eğimli soğutucu ile dökümü, yarı-katı şekillendirilmesi ve karakterizasyonu, Yildiz Technical University, Graduate School Of Natural And Applied Sciences, 2023

Postgraduate, MAGNEZYUM ALAŞIMLARINDAN İMAL EDİLEN VÜCUT İÇİ İMPLANTLAR İÇİN POLİMER ESASLI KAPLAMALARIN GELİŞTİRİLMESİ, Yıldız Teknik Üniversitesi, Graduate School of Natural and Applied Sciences, Metalurji Ve Malzeme Mühendisliği, 2016

### Research Areas

Metallurgical and Materials Engineering, Production Metallurgy, Principles of Foundry Technology, Engineering and Technology

### Academic Titles / Tasks

Assistant Professor, Yildiz Technical University, Faculty Of Chemical And Metallurgical Engineering, Department Of Metallurgical And Materials Engineering, 2024 - Continues

Research Assistant, Yildiz Technical University, Faculty Of Chemical And Metallurgical Engineering, Department Of Metallurgical And Materials Engineering, 2013 - 2024

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

- I. **Microstructure evolution of AlSi10Mg alloy in RAP process**  
Tütük İ., Acar S., Özer G., Güler K. A.  
MATERIALPRUEFUNG/MATERIALS TESTING, vol.66, no.11, pp.1820-1828, 2024 (SCI-Expanded)
- II. **Impacts of T6 heat treatment on the microstructural, mechanical, and corrosion properties of thixoformed AA7075 alloy produced by cooling slope casting**  
Acar S., Güler K. A.  
MATERIALS RESEARCH EXPRESS, vol.11, no.10, pp.1-13, 2024 (SCI-Expanded)
- III. **Microstructural, hardness, and wear properties of Mg2Si-reinforced Al matrix in-situ composites produced by low superheat casting**  
Ozkan T., Tutuk I., ACAR S., GECÜ R., GÜLER K. A.  
Materials Today Communications, vol.38, 2024 (SCI-Expanded)
- IV. **Electrochemical corrosion behaviour of UNS S32205 duplex stainless steel dependent on sigma phase precipitation**  
Kısasöz B. Ö., Tütük İ., ACAR S., KISASÖZ A.  
Materialpruefung/Materials Testing, 2024 (SCI-Expanded)
- V. **Microstructure and wear characteristics of hybrid reinforced (ex-situ SiC-in-situ Mg2Si) Al matrix composites produced by vacuum infiltration method**  
Birsen D., Tütük İ., Acar S., Karabeyoğlu S. S., Özer G., Güler K. A.  
MATERIALS CHEMISTRY AND PHYSICS, vol.302, pp.127743, 2023 (SCI-Expanded)
- VI. **The Application of the Direct Water Cooling Process on the Lost-Foam Casting Technique to Improve Microstructural and Mechanical Properties of A356 Alloy**  
Tutuk I., ACAR S., GÜLER K. A.  
International Journal of Metalcasting, vol.17, no.3, pp.2324-2337, 2023 (SCI-Expanded)
- VII. **A THOROUGH STUDY ON THIXOFORMABILITY OF THE COOLING SLOPE CAST 7075 FEEDSTOCKS: STEP-BY-STEP OPTIMIZATION OF THE FEEDSTOCK PRODUCTION AND THIXOFORMING PROCESSES**  
Acar S., Güler K. A.  
INTERNATIONAL JOURNAL OF METALCASTING, vol.17, no.2, pp.717-739, 2023 (SCI-Expanded)
- VIII. **A Preliminary Study Upon the Applicability of the Direct Water Cooling with the Lost Foam Casting Process**  
ACAR S., GÜLER K. A.  
INTERNATIONAL JOURNAL OF METALCASTING, vol.15, no.1, pp.88-97, 2021 (SCI-Expanded)
- IX. **Producing non-dendritic A356 and A380 feedstocks: Evaluation of the effects of cooling slope casting parameters**  
ACAR S., GÜLER K. A.  
MATERIALS TESTING, vol.62, no.11, pp.1147-1152, 2020 (SCI-Expanded)
- X. **Investigation of the surface quality and dimensional accuracy of polymer patterns produced by selective laser sintering (SLS) method for investment casting (IC)**  
Özer G., Özbay B., Öter Z. Ç., Tarakçı G., Yılmaz M. S., Bulduk M. E., Koç E., Acar S., Güler K. A.  
International Journal Of Cast Metals Research, vol.25, no.3, pp.146-152, 2020 (SCI-Expanded)
- XI. **Evaluation of the reheating behavior of the cooling slope cast A356 and A380 aluminum alloys**  
Acar S., Açıcı N., Güler K. A.  
MATERIALS RESEARCH EXPRESS, vol.6, no.12, 2019 (SCI-Expanded)
- XII. **A Study on Al/Cu Bimetal Production by Lost Foam Casting**  
ACAR S., GECÜ R., KISASÖZ A., GÜLER K. A., KARAASLAN A.  
PRAKTISCHE METALLOGRAPHIE-PRACTICAL METALLOGRAPHY, vol.55, no.11, pp.728-740, 2018 (SCI-Expanded)
- XIII. **Investigation of carbon contamination in lost foam castings of low carbon steel**  
KILIÇ Ö., ACAR S., KISASÖZ A., GÜLER K. A.  
CHINA FOUNDRY, vol.15, no.5, pp.384-389, 2018 (SCI-Expanded)
- XIV. **Influence of T6 heat treatment on A356 and A380 aluminium alloys manufactured by thixoforging combined with low superheat casting**  
GECÜ R., ACAR S., KISASÖZ A., ALTUG GULER K. A., KARAASLAN A.

Transactions of Nonferrous Metals Society of China (English Edition), vol.28, no.3, pp.385-392, 2018 (SCI-Expanded)

- XV. **Characterization of Mechanical Properties and Corrosion Behaviours of Mn and Al Bronze Castings**  
Turker M., ACAR S., CÖMERT Z. Y., KISASÖZ A., GÜLER K. A.  
PRAKTISCHE METALLOGRAPHIE-PRACTICAL METALLOGRAPHY, vol.55, no.1, pp.5-18, 2018 (SCI-Expanded)

### Articles Published in Other Journals

- I. **Effect of Waste Titanium Chips Addition Into the Aluminum Alloys on Their Microstructure**  
Ozer G., ACAR S., KISASOZ A., GÜLER K. A.  
GAZI UNIVERSITY JOURNAL OF SCIENCE, vol.34, no.4, pp.1096-1105, 2021 (ESCI)
- II. **Preparation of Melt Derived 45S5 Bioactive Glass from Rice Hull Ash and Its Characterization**  
Yücel S., Özçimen D., Terzioğlu P., Acar S., Yaman C.  
ADVANCED SCIENCE LETTERS, vol.19, no.12, pp.3477-3481, 2013 (Peer-Reviewed Journal)

### Refereed Congress / Symposium Publications in Proceedings

- I. **INVESTIGATION OF THE MECHANICAL VIBRATION EFFECT IN COOLING SLOPE CASTING**  
GÜNEŞ B., ACAR S., GÜLER K. A.  
INTERNATIONAL SCIENTIFIC RESEARCH AND INNOVATION CONGRESS, Turkey, 5 June - 06 July 2024
- II. **Effect of Dynamic Stimuli on Artificial Aging in Casting and Solidification of 2014 Al Alloy**  
Dönmez Y. T., ACAR S., GÜLER K. A.  
2. ULUSLARARASI MÜHENDİSLİK VE FEN BİLİMLERİ KONGRESİ, İstanbul, Turkey, 16 - 17 December 2023
- III. **Investigation of Pouring Temperature for Direct Water-Cooled Aluminum Lost Foam Castings**  
Tütük İ., Acar S., Güler K. A.  
10. Uluslararası ALÜMİNYUM SEMPOZYUMU, İstanbul, Turkey, 3 - 04 March 2022, pp.364-367
- IV. **Effect of Aging Conditions of AA6063 and AA6061 Alloys on Corrosion Behavior**  
Tütük İ., Doğan M., Acar S., Öztürk K., Güler K. A.  
10. Uluslararası ALÜMİNYUM SEMPOZYUMU, İstanbul, Turkey, 3 - 04 March 2022, pp.294-298
- V. **Aluminium Matrix In-Situ Ex-Situ Hybrid Composite Production By Vacuum Infiltration Method**  
Birsen D., Tütük İ., Öztürk K., Acar S., Güler K. A.  
10. Uluslararası ALÜMİNYUM SEMPOZYUMU, İstanbul, Turkey, 3 - 04 March 2022, pp.471-474
- VI. **Production of Aluminium Matrix in-Situ Composites Using Low Superheat Casting Method**  
Özkan T., Tütük İ., Acar S., Güler K. A.  
10. Uluslararası ALÜMİNYUM SEMPOZYUMU, İstanbul, Turkey, 3 - 04 March 2022, pp.467-470
- VII. **A Preliminary Study on TiO<sub>2</sub> Coating Deposited on the AISI 2205 by High Energy Ball Milling**  
ACAR S., BİROL B., KISASÖZ A.  
International Metallurgy and Materials Congress (IMMC2021), Online, Turkey, 10 - 12 June 2021, pp.511-514
- VIII. **The effect of orbital shaking on the microstructure of lost foam cast A356 aluminum alloy**  
Kılıç Ö., Acar S., Güler K. A.  
9th International Aluminium Symposium, İstanbul, Turkey, 10 - 11 October 2019, pp.256-260
- IX. **A Study on the Effects of Solution Heat Treatment Time on Eutectic Silicon Morphology for A380 Alloy**  
ACAR S., GECÜ R., KISASÖZ A., GÜLER K. A., KARAASLAN A.  
19th International Metallurgy and Materials Congress, İstanbul, Turkey, 25 - 27 October 2018, pp.304-306
- X. **Effects of Reheating Time on Hardness and Microstructural Properties of Thixoforged AA2014 Alloy Manufactured via Cooling Slope Casting**  
ACAR S., GÜLER K. A.  
19th International Metallurgy and Materials Congress, İstanbul, Turkey, 25 October 2018, pp.269-271

- XI. **Investigation of the Effects of Solution Heat Treatment Time on the Eutectic Silicon for A356 Alloy**  
ACAR S., GECÜ R., KISASÖZ A., GÜLER K. A., KARAASLAN A.  
2. International Conference on Engineering Technology and Innovation (ICETI), Budapeşte, Hungary, 07 March 2018, pp.268-272
- XII. **Dry Sliding Wear Properties of AA7075 Aluminium Matrix Hybrid Composites**  
GECÜ R., ACAR S., KISASÖZ A., GÜLER K. A., KARAASLAN A.  
2. International Conference on Engineering Technology and Innovation (ICETI), Budapeşte, Hungary, 07 March 2018, pp.295-300
- XIII. **Cooling Slope Casting and Thixoforging of A319 Alloy**  
ACAR S., GÜLER K. A.  
2. International Conference on Engineering Technology and Innovation (ICETI), Budapeşte, Hungary, 07 March 2018, pp.57-62
- XIV. **A356 Alaşımının Eğimli Soğutucu İle Dökümü ve Yarı-Katı Dövme İşlemi**  
Açıcı N., ACAR S., GÜLER K. A.  
8. Alüminyum Sempozyumu, İstanbul, Turkey, 05 October 2017, pp.294-298
- XV. **Aging of A356 Aluminum Billets Produced by Semi-Solid Metal Processing**  
GECÜ R., ACAR S., KISASÖZ A., GÜLER K. A., KARAASLAN A.  
3rd International Iron & Steel Symposium, Karabük, Turkey, 03 April 2017, pp.267-270
- XVI. **Corrosion, Mechanical and Microstructural Characteristics of Modified Navy G Bronze Casts**  
TURKER M., ACAR S., CÖMERT Z. Y., KISASÖZ A., GÜLER K. A.  
International Conference on Engineering Technology and Innovation, Sarajevo, Bosnia And Herzegovina, 22 March 2017, pp.303-305
- XVII. **Microstructural Evaluation of T6-Treated A380 Alloy Manufactured by Semi-Solid Metal Casting**  
GECÜ R., ACAR S., KISASÖZ A., GÜLER K. A., KARAASLAN A.  
International Conference on Engineering Technology and Innovation, Sarajevo, Bosnia And Herzegovina, 22 March 2017, pp.284-288
- XVIII. **Effect of solvent and concentration on coating quality of dip coated polycaprolactone (PCL) on AZ91E alloy to reduce degradation rate**  
ACAR S., DERMAN S., AKÇA C.  
2nd International Conference on Engineering and Natural Sciences (ICENS 2016), Sarajevo, Bosnia And Herzegovina, 24 May 2016, pp.1
- XIX. **Examination of coating parameters of biopolymer coating on AZ91D magnesium alloy used as implant in human**  
AKÇA C., ACAR S., DERMAN S.  
Metal 2015, 3 - 05 June 2015

## Episodes in the Encyclopedia

### I. Lost Foam Casting of Metallic Parts and Structures

Güler K. A., Acar S.

Elsevier Science, Oxford/Amsterdam , pp.1-14, 2020

## Supported Projects

Güler K. A., Acar S., TUBITAK Project, Development of Direct Water Cooling Process for the Lost Foam Casting Technique, 2020 - 2022

GÜLER K. A., ACAR S., Project Supported by Higher Education Institutions, Alüminyum dövme alaşımlarının eğimli soğutucu ile dökümü - yarıkatı şekillendirilmesi ve karakterizasyonu., 2019 - 2022

KISASÖZ A., ACAR S., GECÜ R., KARAASLAN A., GÜLER K. A., Project Supported by Higher Education Institutions, Isıya

Dayanıklı 2.4879 Alaşımının Yüksek Sıcaklık Uygulamalarındaki Özellik Değişimlerinin Belirlenmesi, 2017 - 2019

KARAASLAN A., ACAR S., GECÜ R., KISASÖZ A., GÜLER K. A., Project Supported by Higher Education Institutions, Geri Dönüştürülebilir Metal Takviyeler Kullanılarak Üretilen Alüminyum Matrisli Metal-Metal Kompozitlerin Aşınma Özelliklerinin Belirlenmesi, 2017 - 2019

KARAASLAN A., ACAR S., KISASÖZ A., GECÜ R., GÜLER K. A., Project Supported by Higher Education Institutions, Çift Fazlı Paslanmaz Çelikte Ferrit-Östenit Faz Dengesinin 475 °C Kırılma Üzerindeki Etkisinin İncelenmesi, 2017 - 2019

AKÇA C., ACAR S., Project Supported by Higher Education Institutions, Magnezyum Alaşımından İmal Edilen Vücut İçi İmplantlar için Polimer Esaslı Kaplamaların Geliştirilmesi, 2016 - 2016

## Metrics

Publication: 37

Citation (WoS): 64

Citation (Scopus): 110

H-Index (WoS): 5

H-Index (Scopus): 6

## Scholarships

2211-E Doğrudan Doktora Burs Programı, TÜBİTAK, 2016 - Continues

2228-A SON SINIF LİSANS ÖĞRENCİLERİ İÇİN LİSANSÜSTÜ (YÜKSEK LİSANS/DOKTORA) BURS PROGRAMI, TÜBİTAK, 2013 - Continues

## Non Academic Experience

RDNA TEKNOLOJİLERİ BİYOMÜHENDİSLİK ARGE SAN. VE TİC. LTD. ŞTİ, KURUCU ORTAK