

## Assoc. Prof. GÜLSÜM TOPATEŞ

### Personal Information

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### International Researcher IDs

ORCID: 0000-0003-4453-8219

ScopusID: 35335349200

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### Education Information

Doctorate, Anadolu University, Faculty Of Engineering-Architecture, Department Of Ceramic Engineering, Turkey 2006 - 2013

Postgraduate, Anadolu University, Faculty Of Engineering, Department Of Ceramic Engineering, Turkey 2000 - 2003

Undergraduate, Anadolu University, Faculty Of Engineering-Architecture, Department Of Ceramic Engineering, Turkey 1996 - 2000

### Foreign Languages

English, C1 Advanced

German, A2 Elementary

### Dissertations

Doctorate, Dizel partikül filtre (DPF) üretimine yönelik si3n4 esash malzeme geliştirilmesi, Anadolu Üniversitesi, Mühendislik-Mimarlık Fakültesi, Seramik Mühendisliği Bölümü, 2013

### Research Areas

Metallurgical and Materials Engineering, Engineering and Technology

### Academic Titles / Tasks

Associate Professor, Ankara Yildirim Beyazit University, Mühendislik ve Doğa Bilimleri Fakültesi, Metalurji ve Malzeme Mühendisliği, 2020 - Continues

Assistant Professor, Ankara Yildirim Beyazit University, Mühendislik ve Doğa Bilimleri Fakültesi, Metalurji ve Malzeme Mühendisliği, 2015 - 2020

Research Assistant, Canakkale Onsekiz Mart University, Çan Meslek Yüksekokulu, 2013 - 2015

Research Assistant, Canakkale Onsekiz Mart University, Çan Meslek Yüksekokulu, Malzeme Ve Malzeme İşleme Teknolojileri Bölümü, 2005 - 2006

Lecturer, Canakkale Onsekiz Mart University, Çan Meslek Yüksekokulu, Malzeme Ve Malzeme İşleme Teknolojileri

Bölümü, 2003 - 2005

## Academic and Administrative Experience

Ankara Yıldırım Beyazıt Üniversitesi, Mühendislik ve Doğa Bilimleri Fakültesi, Metalurji Ve Malzeme Mühendisliği Bölümü, 2015 - Continues

## Courses

Glass Technology, Undergraduate, 2020 - 2021  
Materials Processing Laboratory, Undergraduate, 2020 - 2021  
Processing and Application of Porous Ceramics, Doctorate, 2019 - 2020  
Phase Relations and Diagrams, Undergraduate, 2019 - 2020  
Phase Diagrams for Advanced Materials, Doctorate, 2020 - 2021  
Nanotechnology and Nanomaterials, Undergraduate, 2020 - 2021

## Advising Theses

Topateş G., Effect of Tempering Conditions on the Final Properties of Ball Bearings, Postgraduate, B.İpek(Student), 2021  
Topateş G., PRODUCTION OF ZrO<sub>2</sub> - Si<sub>3</sub>N<sub>4</sub> COMPOSITES FOR DENTAL APPLICATIONS, Postgraduate, S.Çetin(Student), 2021  
Topateş G., BORON CARBIDE SYNTHESIS BY POLYMERIC PRECURSOR METHOD, Postgraduate, H.Doyuran(Student), 2021  
TOPATEŞ G., Production of ZrO<sub>2</sub>-Si<sub>3</sub>N<sub>4</sub> Composite for Dental Applications, Postgraduate, S.EKŞİ(Student), 2021  
Topateş G., Production of Gradient Porous Silicon Nitride Ceramics for Bone Grafting Applications, Postgraduate, S.ONAT(Student), 2020

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

- I. **Functionally graded Al<sub>2</sub>O<sub>3</sub>-based ceramic systems by gel casting method**  
TOPATEŞ G., AKÇA E., TÜR Y. K., DURAN C.  
International Journal of Applied Ceramic Technology, vol.22, no.1, 2025 (SCI-Expanded)
- II. **Investigation of flame-retardant characteristics of natural flax coated with hydrothermally synthesized calcium borate and organic PDA**  
Akçakoca İ., Aydaş B., Öktem M. F., Topateş G.  
Journal of Thermal Analysis and Calorimetry, vol.149, no.17, pp.9109-9117, 2024 (SCI-Expanded)
- III. **Effect of processing parameters on the morphology of hydrothermally synthesized calcium borate powders**  
Akçakoca İ., Karayazıcı M., Topateş G.  
AMERICAN CERAMIC SOCIETY, JOURNAL, vol.106, pp.3188-3198, 2023 (SCI-Expanded)
- IV. **Biocompatibility of silicon nitride produced via partial sintering & tape casting**  
Cecen B., TOPATEŞ G., Kara A., Akbulut S. O., Havitcioglu H., KOZACI L. D.  
Ceramics International, vol.47, no.3, pp.3938-3945, 2021 (SCI-Expanded)
- V. **Starch consolidation of SiC ceramics: processing and low-temperature sintering in an air atmosphere**  
Kalemtaş A., Topateş G., Aytekin Aydın M. T., Özey N.  
Journal of Asian Ceramic Societies, vol.8, no.1, pp.106-115, 2020 (SCI-Expanded)
- VI. **The effect of zircon particle size on the surface properties of sanitaryware glaze**

- TOPATEŞ G., Alici B., Tarhan B., Tarhan M.  
Materials Research Express, vol.7, no.1, 2020 (SCI-Expanded)
- VII. **Silicon nitride ceramic for all-ceramic dental restorations**  
ÖZDOĞAN M. S., GÜNGÖRMÜŞ M., Çelik A., TOPATEŞ G.  
Dental Materials Journal, vol.39, no.6, pp.1080-1086, 2020 (SCI-Expanded)
- VIII. **Production of Si<sub>3</sub>N<sub>4</sub> porous beads via carbothermal reduction and nitridation technique**  
TOPATEŞ G., Kalemtaş A.  
Journal of Asian Ceramic Societies, vol.8, no.4, pp.1197-1205, 2020 (SCI-Expanded)
- IX. **Recycling of waste flat glass in the fabrication of Si<sub>3</sub>N<sub>4</sub> powder by the carbo-thermal reduction and nitridation**  
TOPATEŞ G.  
International Journal of Applied Ceramic Technology, 2019 (SCI-Expanded)
- X. **Chemical durability of zircon containing glass-ceramic glazes**  
Topates G., Tarhan B., Tarhan M.  
Ceramics International, vol.43, no.15, pp.12333-12337, 2017 (SCI-Expanded)
- XI. **The effects of sintering temperature on phase and pore evolution in porcelain tiles**  
Gultekin E. E., Topates G., KURAMA S.  
Ceramics International, vol.43, no.14, pp.11511-11515, 2017 (SCI-Expanded)
- XII. **Microstructure-permeability relation of porous β-Si<sub>3</sub>N<sub>4</sub> ceramics**  
Topates G., Mammitzsch L., Petasch U., Adler J., Kara F., Mandal H.  
Journal of the European Ceramic Society, vol.33, no.9, pp.1545-1551, 2013 (SCI-Expanded)
- XIII. **Mechanical characterization of highly porous β-Si<sub>3</sub>N<sub>4</sub> ceramics fabricated via partial sintering & starch addition**  
Kalemtaş A., Topates G., Özcoban H., Mandal H., Kara F., Janssen R.  
Journal of the European Ceramic Society, vol.33, no.9, pp.1507-1515, 2013 (SCI-Expanded)
- XIV. **Thermal properties of pressureless melt infiltrated AlN-Si-Al composites**  
Kalemtaş A., Topates G., Bahadır O., Kaya İsci P., Mandal H.  
Transactions of Nonferrous Metals Society of China (English Edition), vol.23, no.5, pp.1304-1313, 2013 (SCI-Expanded)
- XV. **Production and permeability of porous Si<sub>3</sub>N<sub>4</sub> ceramics produced by starch addition**  
Topates G., Petasch U., Adler J., Kara F., Mandal H.  
Journal of Asian Ceramic Societies, vol.1, no.3, pp.257-261, 2013 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Air Atmosphere Sintering and Characterization of Dense Si<sub>3</sub>N<sub>4</sub> Ceramics**  
Topateş G.  
Afyon Kocatepe Üniversitesi Fen ve Mühendislik Bilimleri Dergisi, vol.24, no.4, pp.940-946, 2024 (Peer-Reviewed Journal)
- II. **Impedance testing of porous Si<sub>3</sub>N<sub>4</sub> scaffolds for skeletal implant applications**  
Akbulut S. O., Ghorbanpoor H., Özbek İpteç B., Butterworth., Avcıoğlu G., Kozacı L. D., Topateş G., Corrigan D. K., Avcı H., Doğan Güzel F.  
SN Applied Sciences, vol.2, no.283, pp.1-6, 2020 (ESCI)
- III. **Aşamalı Gözenek Yapısına Sahip Si<sub>3</sub>N<sub>4</sub> Seramiklerinin Üretimi ve Mekanik Karakterizasyonu**  
TOPATEŞ G., İPEK B., ÇELİK A.  
Afyon Kocatepe Üniversitesi Fen Ve Mühendislik Bilimleri Dergisi, vol.19, pp.499-504, 2019 (Peer-Reviewed Journal)
- IV. **GÖZENEK OLUŞTURUCU İLAVESİYLE TÜRBİN MOTOR BİLEŞENLERİ İÇİN GÖZENEKLİ MÜLLİT SERAMİK ÜRETİMİ**  
EREN GÜLTEKİN E., TOPATEŞ G.

Niğde Ömer Halisdemir Üniversitesi Mühendislik Bilimleri Dergisi, vol.8, no.2, pp.1096-1114, 2019 (Peer-Reviewed Journal)

V. **Al<sub>2</sub>O<sub>3</sub> ceramics with graded porosity produced from natural and artificial pore formers**  
TOPATEŞ G.

Politeknik Dergisi, vol.20, no.3, pp.595-598, 2017 (Peer-Reviewed Journal)

VI. **Sonic Characterization of Porous Si<sub>3</sub>N<sub>4</sub> Produced By Various Pore Formers**  
TOPATEŞ G., EREN GÜLTEKİN E.

Journal of Achievements in Materials and Manufacturing Engineering, vol.63, pp.13-18, 2014 (Scopus)

## Books & Book Chapters

I. **Cellular Response to Calcium Phosphate Cements**

ÇEÇEN B., KALEMTAŞ A., TOPATEŞ G., KOZACI L. D.

in: Handbook of Biomaterials Biocompatibility, Masoud Mozafari, Editor, Elsevier, pp.369-393, 2020

## Supported Projects

TOPATEŞ G., DURAN C., BİLAÇ O., Project Supported by Higher Education Institutions, LTCC Uygulamaları için nano hBNkatkılı CamKordierit Kompozitlerin Geliştirilmesi ve Karakterizasyonu, 2024 - Continues

TOPATEŞ G., Project Supported by Higher Education Institutions, Perlit Hammaddesinin Seramik Sağlık Gereçleri Bünyesinde Kullanımının Araştırılması, 2018 - Continues

TOPATEŞ G., Sürel M. Ş., Project Supported by Higher Education Institutions, Kordierit seramiklerde kompozisyon yapı ve özellik ilişkilerinin incelenmesi, 2024 - 2024

TOPATEŞ G., ÖKTEM M. F., AYDAŞ B., AKÇAKOCA İ., Project Supported by Higher Education Institutions, Hidrotermal Sentez ile Kalsiyum Borat Toz Üretimi ve Polimer Esaslı Kompozit ve Kumaşlarda Takviye Faz Olarak Kullanılması, 2022 - 2023

TOPATEŞ G., Project Supported by Higher Education Institutions, AŞAMALI GÖZENEK YAPISINA SAHİP Si<sub>3</sub>N<sub>4</sub> SERAMİKLERİNİN CANLI HÜCRE TESTLERİNDE BİYOUYUMLULUKLARININ ARAŞTIRILMASI, 2019 - 2019

Topateş G., Project Supported by Higher Education Institutions, Farklı Şekillendirme Yöntemleri ile Aşamalı Gözeneğe Sahip Si<sub>3</sub>N<sub>4</sub> Seramik Üretiminin ve Üretilen Malzemenin Biyoseramik Malzeme Olarak Kullanım İmkanının Araştırılması, 2017 - 2019

Topateş G., TUBİTAK Project, Başlangıç Ar-Ge projeleri destekleme programı-SiO<sub>2</sub> Başlangıç Tozu Kullanılarak Doğrudan Si<sub>3</sub>N<sub>4</sub> Köpük Filtre Üretimi, 2017 - 2018

TOPATEŞ G., Project Supported by Higher Education Institutions, Karbotermal İndirgeme ve Nitrüleme Yöntemi ile Azot Esaslı Toz Üretimi ve Tozların Kompozit Üretiminde Kullanımının Araştırılması, 2015 - 2017

TOPATEŞ G., TUBİTAK Project, Sodyum Borat Bağlı Gözenekli SiC-Si<sub>3</sub>N<sub>4</sub> Kompozitlerin Üretim ve Karakterizasyonu, TUBİTAK Ulusal Genç Araştırmacı Kariyer Geliştirme Programı, 2014 - 2017

## Activities in Scientific Journals

Eskişehir Technical University Journal of Science and and Technology A- Applied Sciences and Engineering, Editor, 2023 - Continues

## Mobility Activity

Post Doc, Post Doc, Fraunhofer Institute for Ceramic Technologies and Systems, Germany, 2018 - 2018

## **Metrics**

Publication: 29

Citation (WoS): 12

Citation (Scopus): 220

H-Index (WoS): 2

H-Index (Scopus): 7

## **Congress and Symposium Activities**

2nd International Eurasian Conference on Biological and Chemical Sciences (EurasianBioChem 2019), Working Group, Ankara, Turkey, 2019

International Porous and Powder Materials Symposium and Exhibition, Working Group, Aydın, Turkey, 2017

Advanced Research Workshop Engineering Ceramics, Working Group, Bratislava, Slovakia, 2011

International Conference on High Performance Ceramics, Working Group, Harbin, China, 2009

International Symposium on Sialons and Non-Oxides, Working Group, Kyoto, Japan, 2007