

Asst. Prof. DUYGU KURU

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International Researcher IDs

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Yoksis Researcher ID: 36174

Biography

Recycling, Thin Films, Composite Material, Surface Characterization, 2D Materials, Nanomaterials, Boron Nitride, Boron Coating, boron nitride quantum dots

Education Information

Doctorate, Bilecik Seyh Edebali University, Fen Bilimleri Enstitüsü, Kimya Mühendisliği (Dr) (Anadolu Üniv. Ortak), Turkey 2015 - 2021

Postgraduate, Ankara University, Fen Bilimleri Enstitüsü, Kimya Mühendisliği (YI) (Tezli), Turkey 2011 - 2014

Undergraduate, Gazi University, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, Turkey 2007 - 2011

Dissertations

Doctorate, Bor nitrür ince filmle cam malzemelerin UV koruyucu özelliklerinin geliştirilmesi: Zeytinyağı örneği, Bilecik Seyh Edebali University, Fen Bilimleri Enstitüsü, 2021

Postgraduate, Bor Oksitten Mekanokimyasal Sentez Yöntemi ile İndirgenmiş Bor Urunlerinin Üretimi, Ankara University, Fen Bilimleri Enstitüsü, Kimya Mühendisliği (YI) (Tezli), 2014

Research Areas

Chemical Engineering and Technology, Engineering and Technology

Academic Titles / Tasks

Assistant Professor, Bilecik Seyh Edebali University, Mühendislik Fakültesi, Kimya Mühendisliği, 2022 - Continues

Research Assistant, Bilecik Seyh Edebali University, Mühendislik Fakültesi, Kimya Mühendisliği, 2013 - 2021

Courses

İş Sağlığı ve Güvenliği, Associate Degree, 2022 - 2023

Genel Kimya, Undergraduate, 2022 - 2023

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Hydrogen Evolution Reaction Activity of Electrochemically Exfoliated Borophene**
Can S., Kuru D., Kuru C.
JOURNAL OF NANOPARTICLE RESEARCH, vol.26, no.183, pp.183, 2024 (SCI-Expanded)
- II. **A new route to electrochemical exfoliation of borophene for scalable production**
KURU D., KURU C.
Journal of Materials Science, vol.59, no.23, pp.10220-10231, 2024 (SCI-Expanded)
- III. **Boron nitride quantum dots/polyvinyl butyral nanocomposite films for the enhanced photoluminescence and UV shielding properties**
Emir P., Kuru D.
Journal of Applied Polymer Science, vol.141, no.13, 2024 (SCI-Expanded)
- IV. **The Effect of Surface Treatment/Polymer Type on Formation of 3D-Boron Nitride Foams**
Akpınar Borazan A., Kuru D., Dandıl S., Açıkgöz Ç.
Journal of Nano Research, vol.80, pp.37-48, 2023 (SCI-Expanded)
- V. **Synthesis of Boron Nitride Nanosheets/Polyvinyl Butyral Thin Film: An Efficient Coating for UV Protection of Extra Virgin Olive Oil in Glass Bottles**
KURU D., AKPINAR BORAZAN A., AY N.
JOURNAL OF NANO RESEARCH, vol.72, pp.37-51, 2022 (SCI-Expanded)
- VI. **Effect of Processing Conditions on the Absorption Behavior of 3D Boron Nitride Foams in Various Aqueous Mixtures**
Kuru D., Akpınar Borazan A., Sezer G.
Water, Air, and Soil Pollution, vol.233, no.2, 2022 (SCI-Expanded)
- VII. **Physical, optical and mechanical properties of BNNSs/PVB coatings under UV irradiation**
KURU D., Borazan A., Ay N.
Emerging Materials Research, vol.9, no.2, pp.402-409, 2020 (SCI-Expanded)
- VIII. **Effect of chicken feather and boron compounds as filler on mechanical and flame retardancy properties of polymer composite materials**
KURU D., AKPINAR BORAZAN A., GÜRÜ M.
Waste Management and Research, vol.36, no.11, pp.1029-1036, 2018 (SCI-Expanded)
- IX. **A new approach to the manufacturing of elemental boron from boron oxide by carbon monoxide**
Gökdağ D., GÜRÜ M., Toğrul T.
International Journal of Hydrogen Energy, vol.42, no.28, pp.18028-18033, 2017 (SCI-Expanded)

Articles Published in Other Journals

- I. **Amorf borun elektrokimyasal eksfoliasyonuyla bor nanotabakalarının sentezi ve karakterizasyonu**
Kuru D.
BOR DERGİSİ, vol.9, no.3, pp.111-119, 2024 (Peer-Reviewed Journal)
- II. **Evaluation of Waste Chicken Feather in Soil Improvement**
GÖRGÜN B., BOZKURT E., KURU D., BORAZAN A. A., URAL N.
Bilecik Şeyh Edebali Üniversitesi Fen Bilimleri Dergisi, vol.7, no.2, pp.1196-1205, 2020 (Peer-Reviewed Journal)
- III. **Effect of UV Irradiation on Storage of Riviera Olive Oil in Glass Bottles Coated with BNNSs/PVB Multilayer Thin Film**
KURU D., AKPINAR BORAZAN A., AY N.
Nevşehir Bilim ve Teknoloji Dergisi, vol.9, pp.39-46, 2020 (Peer-Reviewed Journal)

- IV. **Atık Yumurta Kabuğu Katkısının Polyester Kompozit Malzeme Üretimine Etkisi**
AKPINAR BORAZAN A., KURU D., SERT S.
Bilecik Şeyh Edebali Üniversitesi Fen Bilimleri Dergisi, vol.6, pp.135-145, 2019 (Peer-Reviewed Journal)
- V. **The Effect of Piranha and Silane Modifications on Boron Nitride Nanosheets (BNNSs) Thin Film Formation**
KURU D., AKPINAR BORAZAN A., AY N.
CUMHURİYET SCIENCE JOURNAL, vol.40, no.2, pp.424-432, 2019 (Peer-Reviewed Journal)
- VI. **Effect of Organic Reinforcement Usage on Mica/Polyester Composite Material**
AKPINAR BORAZAN A., GÖKDAİ D.
CUMHURİYET SCIENCE JOURNAL, vol.38, no.4, pp.603-610, 2017 (Peer-Reviewed Journal)
- VII. **The Influence of Chemically Pre-treated Chestnut Waste and Pinecone Filler Content on the Properties of Polyester Composites**
AKPINAR BORAZAN A., GÖKDAİ D., AÇIKGÖZ Ç., Alp Adiguzel G.
Environment and Ecology Research, vol.5, no.3, pp.235-243, 2017 (Peer-Reviewed Journal)
- VIII. **CHEMICAL COMPOSITION OF TURKISH OKRA SEEDS Hibiscus esculenta L AND THE TOTAL PHENOLIC CONTENT OF OKRA SEEDS FLOUR**
AÇIKGÖZ Ç., AKPINAR BORAZAN A., ANDOĞLU E. M., GÖKDAİ D.
Anadolu University Journal of Science and Technology A- Applied Sciences and Engineering, vol.17, no.5, pp.766-774, 2016 (Peer-Reviewed Journal)
- IX. **SYNTHESIS AND CHARACTERIZATION OF ELEMENTAL BORON FROM BORON OXIDE BY MECHANOCHEMICAL METHOD**
GÖKDAİ D., GÜRÜ M., TOĞRUL T.
Gazi Üniversitesi Mühendislik Mimarlık Fakültesi Dergisi, vol.31, no.2, pp.2-10, 2016 (Scopus)

Books & Book Chapters

- I. **Production of Polyester Composite Material Using Pine Cone Powder as Reinforcement**
GÖKDAİ D., AKPINAR BORAZAN A.
in: ENGINEERING APPROACHES ON SUSTAINABILITY, Zehra Semra Can , Barış Yılmaz, Seval Genç, Candemir Seçkin, Editor, IJOPEC Publication, İstanbul, pp.137-144, 2016

Refereed Congress / Symposium Publications in Proceedings

- I. **OPTICAL PROPERTIES OF LAYER-BY-LAYER ASSEMBLY OF BNNSs/PDDA ON PET FILMS: EFFECT OF UV IRRADIATION**
KURU D.
Anadolu 16. Uluslararası Uygulamalı Bilimler Kongresi, Van, Turkey, 20 - 22 December 2024
- II. **Morphological, structural and photoluminescence properties of boron nitride film coated on glass substrate using different nitrogen precursor**
CAN S., KURU D., Emir P.
7th International Eurasian Conference on Biological and Chemical Sciences (EurasianBioChem 2024), 2 - 04 October 2024
- III. **Effect of Chemical Etching on Boron Nitride Film Formation on Glass Surfaces by Hydrothermal Method**
Can S., Kuru D., Emir P.
13. Uluslararası Akademik Araştırmalar Kongresi , Çankırı, Turkey, 7 - 08 May 2024, pp.1-2
- IV. **SYNTHESIS OF BORON NITRIDE FILM ON GLASS SURFACES BY HYDROTHERMAL METHOD: PH EFFECT**
KURU D., Emir P.

2nd International Congress on Engineering and Sciences, 16 - 17 December 2023

- V. **An Electrochemical Approach for Borophene Production**
KURU D., KURU C.
3rd "International Materials Technologies and Metallurgy Conference (MTM 2023), 11 - 13 October 2023
- VI. **Effect of Boron Nitride Concentration: Synthesis and Characterization of Boron Nitride Nanosheets (BNNs) Exfoliated in Water**
Sezer G., KURU D., AKPINAR BORAZAN A.
5. International Turkic World Conference on Chemical Sciences and Technologies (5th ITWCCST), Sakarya, Turkey, 25 - 29 October 2019
- VII. **Two-dimensional Hexagonal Boron Nitride Nanosheets Grown by Surfactant-added Exfoliation**
Başoğlu S., KURU D., AKPINAR BORAZAN A.
5. International Turkic World Conference on Chemical Sciences and Technologies (5th ITWCCST), Sakarya, Turkey, 25 - 29 October 2019
- VIII. **EFFECT OF UV IRRADIATION ON STORAGE OF RIVIERA OLIVE OIL IN GLASS BOTTLES COATED WITH BNNSS/PVB MULTILAYER THIN FILM**
KURU D., AKPINAR BORAZAN A., AY N.
4th International Conference on Material Science and Technology, Ankara, Turkey, 18 - 20 October 2019, pp.393-397
- IX. **Farklı Bitki Florasına Ait Balın, Antioksidan Aktivite ve Toplam Fenol Miktarına Isıl İşlem Etkisi**
AKPINAR BORAZAN A., KURU D.
3rd International Mediterranean Science and Engineering Congress, 24 - 26 October 2018
- X. **Farklı Bitki Florasına Ait Balın, Antioksidan Aktivite ve Toplam Fenol Miktarına Isıl İşlem Etkisi**
KURU D., AKPINAR BORAZAN A.
3rd International Mediterranean Science and Engineering Congress (IMSEC 2018), Adana, Turkey, 24 - 26 October 2018, pp.962-966
- XI. **THE EFFECTS OF UV EXPOSURE ON THE STRUCTURAL AND MECHANICAL PROPERTIES OF BNNSS THIN FILMS**
KURU D., AKPINAR BORAZAN A., AY N.
3rd International Conference on Material Science and Technology in Cappadocia (IMSTEC'18), 17 - 19 September 2018
- XII. **Effect of Glass Surface Treatment on Boron Nitride Thin Film Formation**
KURU D., AKPINAR BORAZAN A., AY N.
INTERNATIONAL EURASIAN CONFERENCE ON BIOLOGICAL AND CHEMICAL SCIENCES (EurasianBioChem 2018), Ankara, Turkey, 26 - 27 April 2018, pp.89
- XIII. **Effect of Calcination Temperature on Egg shell/Polyester Composites**
KURU D., AKPINAR BORAZAN A.
INTERNATIONAL EURASIAN CONFERENCE ON BIOLOGICAL AND CHEMICAL SCIENCES (EurasianBioChem 2018), Ankara, Turkey, 26 - 27 April 2018, pp.654
- XIV. **Synthesis and Characterization of Boron Nitride Thin Films on Glass Substrate**
GÖKDAĞ D., AKPINAR BORAZAN A., AY N.
2017 ICG Annual Meeting and the 32nd Sisecam Glass Symposium, 22 - 25 October 2017
- XV. **Synthesis and Characterization of Boron Nitride Thin Films on Glass Substrate**
GÖKDAĞ D., AKPINAR BORAZAN A., AY N.
32nd Şişecam Glass Symposium, 22 - 25 October 2017
- XVI. **Pine Cone and Boron Compounds Effect as Reinforcement on Mechanical and Flammability Properties of Polyester Composites**
GÖKDAĞ D., AKPINAR BORAZAN A.
4th International Conference on Computational and Experimental Science and Engineering (ICCES-2017), Antalya, Turkey, 4 - 08 October 2017
- XVII. **Glazing Recipe Selection with AHP for Ceramic Floor Tiles**
AKPINAR BORAZAN A., AÇIKGÖZ Ç., GÖKDAĞ D., ANDOĞLU E. M.

4th International Conference on Computational and Experimental Science and Engineering (ICCESN-2017), 4 - 08 October 2017

- XVIII. **Mechanical and Flame Retardancy Properties of Polyester - (pine cone/boron oxide)Composites**
GÖKDAI D., AKPINAR BORAZAN A.
15th International Conference on Environmental Science and Technology(CEST 2017), Rodos, Greece, 31 August - 02 September 2017
- XIX. **Effect of Chicken Feather and Boron Compounds as Filler on Mechanical and Flame Retardancy Properties of Polymer Composite Materials**
GÖKDAI D., AKPINAR BORAZAN A., GÜRÜ M.
15th International Conference on Environmental Science and Technology(CEST 2017), Rodos, Greece, 31 August - 02 September 2017
- XX. **EFFECT OF PARTICLE SIZE AND CALCINATION OF EGG SHELL AS REINFORCEMENT ON PRODUCTION OF POLYESTER COMPOSITES**
GÖKDAI D., AKPINAR BORAZAN A.
3rd International Conference on Science, Ecology and Technology(ICONSETE 2017), Roma, Italy, 14 - 16 August 2017
- XXI. **Production of Polyester Composite Material Using Pine Cone Powder as Reinforcement**
GÖKDAI D., AKPINAR BORAZAN A.
1st International Congress, ICS 2016, İstanbul, Turkey, 1 - 03 December 2016
- XXII. **Mika Polyester Kompozit Malzemeye Organik Takviye Kullanımının Etkisi**
AKPINAR BORAZAN A., GÖKDAI D., ŞENER M.
12. Ulusal Kimya Mühendisliği Kongresi (UKMK2016), İzmir, Turkey, 23 - 26 August 2016, pp.1110-1115
- XXIII. **Farklı Yöntemlerle Şekillendirmenin PP Gıda AmbalajlarındaToplam Migrasyona Etkisi**
GÖKDAI D., AKPINAR BORAZAN A.
12. Ulusal Kimya Mühendisliği Kongresi (UKMK2016), İzmir, Turkey, 23 - 26 August 2016, pp.1317-1322
- XXIV. **POLYESTER COMPOSITE MATERIAL PRODUCTION USING WASTE OF PET WATER BOTTLES AND PINE**
AKPINAR BORAZAN A., GÖKDAI D., AÇIKBAŞ G., ÇATIR H.
1st INTERNATIONAL BLACK SEA CONGRESS ON ENVIRONMENTAL SCIENCES (IBCESS'2016), 31 August - 03 September 2016, pp.92
- XXV. **EFFECT OF CHESTNUT AND GLASS POWDER ON SOME PHYSICAL AND MECHANICAL PROPERTIES OF POLYESTER COMPOSITES**
GÖKDAI D., AKPINAR BORAZAN A., AÇIKBAŞ G.
1st INTERNATIONAL BLACK SEA CONGRESS ON ENVIRONMENTAL SCIENCES (IBCESS'2016), Giresun, Turkey, 31 August - 03 September 2016, pp.35
- XXVI. **COMPARISON OF PINE CONE POWDER MICA CONTENT ON THE MECHANICAL PROPERTIES OF POLYESTER COMPOSITES**
AKPINAR BORAZAN A., AÇIKBAŞ G., GÖKDAI D., YILMAZ S.
1st INTERNATIONAL BLACK SEA CONGRESS ON ENVIRONMENTAL SCIENCES (IBCESS'2016), 31 August - 03 September 2016
- XXVII. **Effect of Chemical Treatment on Polyester Matrix Composites Reinforced with Chestnut Waste**
AKPINAR BORAZAN A., GÖKDAI D., AÇIKBAŞ G.
I. International Black Sea Congress on Environmental Sciences (IBCESS'16), Giresun, Turkey, 31 August - 03 September 2016
- XXVIII. **A NEW APPROACH TO THE MANUFACTURING AND CHARACTERIZATION OF ELEMENTAL BORON FROM BORON OXIDE BY CARBON MONOXIDE**
GÖKDAI D., GÜRÜ M., TOĞRUL T.
4. European Conference on Renewable Energy Systems, 28 - 31 August 2016
- XXIX. **Mika Polyester Kompozit Malzemeye İnorganik Takviye Kullanımının Etkisi**
AKPINAR BORAZAN A., GÖKDAI D., Şener M.
12. Ulusal Kimya Mühendisliği Kongresi, Turkey, 23 - 26 August 2016
- XXX. **WASTE OF CHICKEN FEATHER AND MARBLE DUST USED FOR FIBER POLYMERCOMPOSITES**

GÖKDAI D., AKPINAR BORAZAN A.

International Porous and Powder Materials Symposium and Exhibition (PPM 2015), 15 - 18 September 2015, pp.0-164

XXXI. EFFECT OF MARBLE PINE CONE WASTE RATIOS ON MECHANICAL PROPERTIES OF POLYESTER MATRIX COMPOSITES

GÖKDAI D., AKPINAR BORAZAN A., AÇIKBAŞ G.

Proceedings of the 14th International Conference on Environmental Science and Technology (CEST2015), 3 - 05 September 2015

Supported Projects

KURU D., CB Strateji ve Bütçe Başkanlığı (Kalkınma Bakanlığı) Projesi, 2010K12052 nolu "Süperiletkenlik Araştırma Merkez Laboratuvarı", 2010 - Continues

KURU D., CAN S., EMİR P., Project Supported by Higher Education Institutions, Cam Yüzeyler Üzerinde Bor Nitrür Filmlerinin Hidrotermal Sentez Yöntemi ile Kaplanması ve Karakterizasyonu, 2023 - 2024

Kuru D., Kuru C., TÜBİTAK Project, Borofenin Elektrokimyasal Eksfoliyasyon Yöntemi İle Yüksek Verimli Ve Ölçeklenebilir Üretimi, 2022 - 2024

Kuru D., Sezer G., TÜBİTAK Project, 3-BOYUTLU GÖZENEKLİ BOR NİTRÜR KÖPÜKLERİN YÜZEY AKTİF MADDE KULLANILARAK ÜRETİMİ VE ATIK SU ARITIMINDA KULLANIMI, 2020 - 2021

Açıkgöz Ç., Akpınar Borazan A., Kuru D., Dandil S., Akın Şahbaz D., Project Supported by Higher Education Institutions, Hegzagonal Bor Nitrürün Alüminyum, Magnezyum ve Paslanmaz Çelik Yüzeyler Üzerine Kaplanması ve Kaplanmış Yüzeylerin Karakterizasyonu, 2018 - 2020

KURU D., AÇIKGÖZ Ç., DANDIL S., Other International Funding Programs, Hegzagonal Bor Nitrürün Alüminyum, Magnezyum ve Paslanmaz Çelik Yüzeyler Üzerine Kaplanması ve Kaplanmış Yüzeylerin Karakterizasyonu, 2018 - 2020

KURU D., Project Supported by Higher Education Institutions, Cam Malzemelerin Daldırma Yöntemiyle Bor Nitrür İnce Filmle Kaplanmasının Araştırılması, 2017 - 2020

DANDIL S., AÇIKGÖZ Ç., AKPINAR BORAZAN A., KURU D., Project Supported by Higher Education Institutions, Bor Nitrür Nanosheet Köpük Kompozitlerinin Üretimi, Karakterizasyonu ve Adsorban Olarak Kullanılabilirliği, 2018 - 2019

KURU D., Project Supported by Higher Education Institutions, Orman ve Hayvansal Atık Kullanımının Borlu Polimer Kompozit Kalitesine Etkisi, 2017 - 2018

Andoğlu Coşkun E. M., Açıkgöz Ç., Kuru D., Akpınar Borazan A., Atılgan Türkmen B., Project Supported by Higher Education Institutions, ORMAN VE HAYVANSAL ATIK KULLANIMININ BORLU POLİMER KOMPOZİT KALİTESİNE ETKİSİ, 2017 - 2018

KURU D., Project Supported by Higher Education Institutions, BİLECİK İLİ DOĞAL TAŞ İŞLEME TESİSLERİ KATI ATIK POTANSİYELİNİN BELİRLENMESİ VE GERİ KAZANIM ÖNERİLERİ, 2016 - 2017

Andoğlu Coşkun E. M., Kuru D., Yurdakul M., Project Supported by Higher Education Institutions, Bilecik İli Doğal Taş İşleme Tesisleri Katı Atık Potansiyelinin Belirlenmesi ve Geri Kazanım Önerileri, 2016 - 2017

AÇIKBAŞ G., KURU D., AKPINAR BORAZAN A., AÇIKGÖZ Ç., Project Supported by Higher Education Institutions, Kestane Kabuğundan Polimer Kompozit Üretimi ve Karakterizasyonu, 2015 - 2016

Activities in Scientific Journals

Innovative Approaches to Engineering Problems, Committee Member, 2024 - Continues

Awards

Sezer G., Kuru D., 2242 Üniversite Öğrencileri Araştırma Projeleri Enerji ve Çevre kategorisi İstanbul-Asya Bölge Sergisi'nde Birincilik Ödülü, Tübitak, January 2020

