

Assoc. Prof. SEDAT SÜRDEM

Personal Information

Email: sedatsurdem@gazi.edu.tr

Web: <https://avesis.gazi.edu.tr/sedatsurdem>

International Researcher IDs

ScholarID: 5YhqUnEAAAAJ

ORCID: 0000-0001-8220-7934

Publons / Web Of Science ResearcherID: AHE-1417-2022

ScopusID: 57202930098

Yoksis Researcher ID: 328166

Education Information

Doctorate, Hacettepe University, Fen Bilimleri Enstitüsü, Kimya A.B.D., Turkey 2004 - 2011

Postgraduate, Middle East Technical University, Graduate School Of Natural And Applied Sciences, Turkey 2001 - 2004

Undergraduate, Middle East Technical University, Faculty Of Education, Mathematics And Science Education, Turkey 1995 - 2000

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Determination and speciation of heavy metals in biological samples and biomonitor systems, Hacettepe University, Fen Bilimleri Enstitüsü, 2011

Postgraduate, On-line preconcentration, speciation and determination of chromium by flame atomic absorption spectrometry (FAAS) and chemiluminescence (CL), Middle East Technical University, Graduate School Of Natural And Applied Sciences, Graduate School Of Natural And Applied Sciences, 2004

Academic Titles / Tasks

Research Assistant, Middle East Technical University, Faculty Of Arts And Sciences, Department Of Chemistry, 2001 - 2006

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Effect of Calcium Oxide on Stress Crack Resistance and Light Transmittance in PET Containers for Packaging Carbonated Beverages**
YUVALI G., DAĞAŞAN BULUCU E., DEMİREL B., YARAŞ A., AKKURT F., SÜRDEM S., Demirel B.
ACS OMEGA, no.3, pp.3491-3498, 2024 (SCI-Expanded)
- II. **Synthesis, characterization and investigation of thermal, mechanical and antibacterial properties of**

boric acid-incorporated polyurethane foams

Surdem S., Surdem S., Yorukoglu A., Yorukoglu A., Ozturk S., Ozturk S., Izci E., Izci E., Yilmaz G., Yilmaz G.
BULLETIN OF MATERIALS SCIENCE, vol.45, no.1, 2022 (SCI-Expanded)

- III. **Boronic Acid Substituted Polyaniline Based Enzymatic Biosensor System for Catechol Detection**
Kalkan Z., Yence M., Turk F., Bektas T. U., Ozturk S., Surdem S., YILDIRIM TIRGİL N.
ELECTROANALYSIS, vol.34, no.1, pp.33-42, 2022 (SCI-Expanded)
- IV. **Combustion and Decay Resistance Performance of Scots Pine Treated with Boron and Copper Based Wood Preservatives Otpornost prema gorenju i propadanju borovine zaštićene sredstvima na bazi bora i bakra**
Sürdem S., Eseroğlu C., Yıldız S., Söğütlü C., Yörükoğlu A.
Drvna Industrija, vol.73, no.4, pp.397-404, 2022 (SCI-Expanded)
- V. **Polyurethane adhesive based on polyol monomers BHET and BHETA depolymerised from PET waste**
Cevher D., Surdem S.
INTERNATIONAL JOURNAL OF ADHESION AND ADHESIVES, vol.105, 2021 (SCI-Expanded)
- VI. **Boron-doped Biphasic Hydroxyapatite/beta-Tricalcium Phosphate for Bone Tissue Engineering**
Pazarçeviren A. E., Tezcaner A., Keskin D., Kolukisa S. T., Surdem S., Evis Z.
BIOLOGICAL TRACE ELEMENT RESEARCH, vol.199, no.3, pp.968-980, 2021 (SCI-Expanded)
- VII. **Extraction of heavy metal complexes from a biofilm colony for biomonitoring the pollution**
Surdem S., Dogan H.
TURKISH JOURNAL OF CHEMISTRY, vol.44, no.3, pp.712-725, 2020 (SCI-Expanded)
- VIII. **A parametric study on the relationship between NaBH₄ and tribological properties in the nickel-boron electroless depositions**
Surdem S., Eseroglu C., ÇITAK R.
Materials Research Express, vol.6, no.12, 2019 (SCI-Expanded)
- IX. **Determination of some properties of ZnSB thin films deposited by a thermionic vacuum arc technique**
Surdem S.
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.30, no.20, pp.19060-19068, 2019 (SCI-Expanded)
- X. **High-performance graphite-supported ruthenium nanocatalyst for hydrogen evolution reaction**
Sen B., Demirkan B., Savk A., Kartop R., Nas M. S., Alma M. H., Surdem S., Sen F.
JOURNAL OF MOLECULAR LIQUIDS, vol.268, pp.807-812, 2018 (SCI-Expanded)
- XI. **Impact of B₂O₃ and La₂O₃ addition on structural, mechanical and biological properties of hydroxyapatite**
Khoshsima S., Alshemary A. Z., Tezcaner A., Surdem S., Evis Z.
PROCESSING AND APPLICATION OF CERAMICS, vol.12, no.2, pp.143-152, 2018 (SCI-Expanded)

Articles Published in Other Journals

- I. **Effect of B₂O₃ additive on chemical decomposition behavior, thermal and mechanical performance of PET B₂O₃ katkısının PET'in kimyasal bozunma davranışı, termal ve mekanik performansı üzerine etkisi**
DEMİREL B., Yaraş A., Akkurt F., SÜRDEM S.
Journal of Boron, vol.7, no.4, pp.535-542, 2022 (Scopus)
- II. **Effect of Boron Oxide (B₂O₃) on Thermal and Mechanical Decomposition Behavior of PET**
DEMİREL B., YARAŞ A., AKKURT F., SÜRDEM S.
BOR DERGİSİ, 2022 (Peer-Reviewed Journal)
- III. **Electrochemical Enzymatic Biosensor Development by Using Different Electropolymerization Conditions of Polyaniline**
YILDIRIM TIRGİL N., KALKAN Z., ÖZTÜRK S., SÜRDEM S., ÖKTEM M. F.

- IV. **Investigation of active site of SARS-CoV-2 MPro enzyme and potential of boron based drug development by molecular docking method** Moleküler doking metoduyla SARS-CoV-2 MPro enziminin aktif bölgesinin incelenmesi ve borlu ilaç geliştirme imkanının araştırılması
Köseoğlu A., Kaya E., SÜRDEM S.
Journal of Boron, vol.7, no.1, pp.411-419, 2022 (Scopus)
- V. **Investigating the effect of drawing process parameters on borosilicate glass fiber thickness**
Yıldırım C., Turgut E., Sürdem S., Yörükoğlu A.
BOR DERGİSİ, vol.7, no.1, pp.403-410, 2022 (Scopus)
- VI. **Biomonitoring of heavy metal levels in izmit gulf in marmara sea with biofilm formation in plexiglass substrate** Marmara denizi'nde izmit körfezinde ağır metal seviyelerinin, pleksiglas substratta biyofilm oluşumu ile biyoizlenmesi
Sürdem S., Doğan M.
El-Cezeri Journal of Science and Engineering, vol.7, no.1, pp.20-30, 2020 (Scopus)
- VII. **Synthesis and characterization of trimethoxy boroxine**
SÜRDEM S.
BOR DERGİSİ, vol.4, no.3, pp.148-152, 2019 (Peer-Reviewed Journal)
- VIII. **Bor katkılı pomza tuğla üretimi, fizikomekanik ve kimyasal özelliklerinin belirlenmesi**
Çelik A. G., Çelik A. G., Yörükoğlu A., Yörükoğlu A., Sürdem S., Sürdem S., Türker A., Erdoğan Y., Erdoğan Y.
BOR DERGİSİ, vol.4, no.2, pp.107-118, 2019 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

- I. **Development of a New Lining Material with Boron Addition**
DİNLER S. N., SÜRDEM S., ATEŞ H.
International Conference on Advanced Materials Science&Engineering and High Tech Device Applications (ICMATSE), Ankara, Turkey, 27 October 2022
- II. **Effect of Substrate Bias on Mechanical Properties of Magnetron Sputtered AlTiN-B₄C Films**
KISACIK Ö., YILDIRIM C., KAÇAR E., TURAN S., SÜRDEM S.
21. Uluslararası Metalurji ve Malzeme Kongresi, İstanbul, Turkey, 06 October 2022
- III. **Optimization of High-Volume Supercritical CO₂ Drying for Silica Aerogel**
YILDIZ E., YILDIRIM C., ARIK M. N., SÜRDEM S., ÖZKUTLU DEMİREL M.
ULUSLARARASI BOR SEMPOZYUMU (BORON 2022), İstanbul, Turkey, 05 October 2022
- IV. **Production of BN (La) Films Using Lab6 Target in The Magnetron Sputtering Method**
KAÇAR E., Kısacık Ö., YILDIRIM C., ESEROĞLU C., DOYURAN H., SÜRDEM S.
ULUSLARARASI BOR SEMPOZYUMU (BORON 2022), İstanbul, Turkey, 05 October 2022
- V. **The effect of sintering temperature on the electromagnetic behaviours of MgB₂ bulks via numerical method**
SAVAŞKAN B., ÖZTÜRK U. K., SÜRDEM S.
7th edition of International Conference on Superconductivity and Magnetism - "ICSM2021, Muğla, Turkey, 21 October 2021
- VI. **Magnetic Levitation Force of Bulk MgB₂ for Different Permanent Magnetic Guideways**
SAVAŞKAN B., ÖZTÜRK U. K., SÜRDEM S.
7th edition of International Conference on Superconductivity and Magnetism - "ICSM2021, Muğla, Turkey, 21 October 2021
- VII. **Effect of Current Type on Ag-TiB₂ Nanocomposite**
COŞMUŞ D., SÜRDEM S., ATEŞ H., KARSLIOĞLU R.
5 th ASIA' International Conference on Surfaces, Coatings and Nanostructured Materials (NANOSMAT-Asia), Ankara, Turkey, 25 October 2021
- VIII. **Effect of Reinforcement Amount on Ag-CdO Nanocomposite Coatings**

COŞMUŞ D., SÜRDEM S., ATEŞ H., KARSLIOĞLU R.

5 th ASIA' International Conference on Surfaces, Coatings and Nanostructured Materials (NANOSMAT-Asia),
Ankara, Turkey, 25 October 2021

- IX. **Electrochemical Enzymatic Biosensor Development by Using Different Electropolymerization Conditions of Polyaniline**
KALKAN Z., ÖZTÜRK S., SÜRDEM S., ÖKTEM M. F., YILDIRIM TİRGİL N.
5th International Marmara Sciences Congress (Imascon 2020), Kocaeli, Turkey, 4 - 05 December 2020
- X. **CdO Reinforced Ag Based Nanocomposite Coating by Pulse and PRC Electrodeposition Method**
COŞMUŞ D., BARUT U., SÜRDEM S., ÇANKAYA G., ATEŞ H., KARSLIOĞLU R.
Advanced Materials Science and Engineering and High Tech Device Applications (ICMATSE), Ankara, Turkey, 2 - 04 October 2020
- XI. **Fabrication and Characterization of Graphene Reinforced Ni-B Nanocomposite Coatings Produced by Electrodeposition**
BARUT U., SÜRDEM S., KARSLIOĞLU R.
Advanced Materials Science and Engineering and High Tech Device Applications (ICMATSE), Ankara, Turkey, 2 - 04 October 2020
- XII. **Microstructural, Surface and Electrochemical Properties of Electrodeposited Ni-B/B₄C Nanocomposite Coatings**
BARUT U., SÜRDEM S., KARSLIOĞLU R.
Advanced Materials Science and Engineering and High Tech Device Applications (ICMATSE), Ankara, Turkey, 2 - 04 October 2020
- XIII. **Low Temperature Synthesis of Boron Carbide by Using High Purity Mannitol Borate**
DOYURAN H., ÖZTÜRK S., SÜRDEM S., TOPATEŞ G., YÖRÜKOĞLU A.
Advanced Materials Science and Engineering and High Tech Device Applications (ICMATSE), Ankara, Turkey, 2 - 04 October 2020
- XIV. **Titanium Diboride (TiB₂) Reinforced Silver Based Nanocomposite Coatings with Electrodeposition Method**
COŞMUŞ D., BARUT U., SÜRDEM S., ÇANKAYA G., ATEŞ H., KARSLIOĞLU R.
Advanced Materials Science and Engineering and High Tech Device Applications (ICMATSE), Ankara, Turkey, 2 - 04 October 2020
- XV. **Yeni Nesil Moleküler Teranostik Ajan**
TOKSOY A., PEKCAN S., GÖKSU K., SÜRDEM S., ALGI F.
32. Ulusal Kimya Kongresi, Turkey, 17 - 19 September 2020
- XVI. **Synthesis And Optoelectronic Properties of Donor-Acceptor Type Organoboron Compounds**
ABACIOĞLU Y., ÖZTÜRK S., CEVHER Ş. C., DENGİZ Ç., SÜRDEM S., ÇIRPAN A.
Istanbul International Organic Electronic Symposium, İstanbul, Turkey, 2 - 04 December 2019
- XVII. **Pet Depolimerizasyonu ve Borlu Polimerlerin Sentezi**
SÜRDEM S.
XVI. Ulusal Spektroskopi Kongresi, Ankara, Turkey, 7 - 08 November 2019
- XVIII. **Biomonitoring of Seasonal Variation in Metal Levels with Microalgae Biofilms in Erdemli District in Mediterranean**
SÜRDEM S., DOĞAN M.
4. International Conference on Material Science and Technology, Ankara, Turkey, 18 - 20 October 2019
- XIX. **Borik Asit ve Ayçiçek Yağından Poliüretanların Sentezi ve Karakterizasyonu**
ÖZTÜRK S., SÜRDEM S.
31. Ulusal Kimya Kongresi, İstanbul, Turkey, 10 - 13 September 2019
- XX. **Synthesis and Characterization of Boron-Containing Acrylated Monomers**
SÜRDEM S.
International Conference on Chemical Energy Semiconductor Photochemistry, Trabzon, Turkey, 4 - 06 September 2019
- XXI. **Organoboron Compounds, Polymers, Applications and Their Market**

SÜRDEM S.

International Conference on Chemical Energy and Semiconductor Photochemistry, Trabzon, Turkey, 4 - 06 September 2019

- XXII. **Biomonitoring of Heavy Metal Levels in Erdemli District in Mediterranean with Biofilm Formation in Plexiglass Substrate**
SÜRDEM S., DOĞAN M.
The Internatinonal Conference on Materials Science, Mechanical and Automotive Engineerings and Technology, Nevşehir, Turkey, 21 - 23 June 2019
- XXIII. **Trimetoksiboroksin Sentezi ve Karekterizasyonu**
ÖZTÜRK S., SÜRDEM S.
VII. Ulusal Anorganik Kimya Kongresi, Çorum, Turkey, 19 - 22 June 2019
- XXIV. **Bor Katkılı Bims Tuğla Üretimi**
ÇELİK A. G., SÜRDEM S., KIZILTAŞ R., DOYURAN H., ERDOĞAN Y., YÖRÜKOĞLU A.
International Symposium on Boron, Nevşehir, Turkey, 17 April 2019
- XXV. **Synthesis and Characterization of Boric Acid Based Polyurethanes**
ÖZTÜRK S., SÜRDEM S.
International Symposium on Boron, Nevşehir, Turkey, 17 - 19 April 2019
- XXVI. **The Investigation of Boron and Copper Leaching from Vacuum-Pressure Treated Scots Pine**
YILDIZ S., ESEROĞLU C., SÜRDEM S., SÖĞÜTLÜ C., YÖRÜKOĞLU A.
International Symposium on Boron, Nevşehir, Turkey, 17 - 19 April 2019
- XXVII. **Yüksek Hidrojen Depolama Kapasitesine Sahip Amonyak Boranın Sentezi ve Karakterizasyonu**
KIZILTAŞ R., ÖZKAN G., ÖZGÜR D., SÜRDEM S.
International Symposium on Boron, Nevşehir, Turkey, 17 - 19 April 2019
- XXVIII. **Akımsız Ni-B Kaplamalarda İndirgeyici Konsantrasyonunun Mikroyapı ve Korozyon Özelliklerine Etkisinin İncelenmesi**
ESEROĞLU C., YILDIZ S., SÜRDEM S., ÇITAK R., AKBULUT H., YÖRÜKOĞLU A.
International Symposium on Boron, Nevşehir, Turkey, 17 - 19 April 2019
- XXIX. **Bor Katkısının Baz Alçı Özelliklerine Etkisi**
DOYURAN H., TOPSOY KOLUKISA S., KIZILTAŞ R., GÖNEN N., SÜRDEM S.
International Symposium on Boron, Nevşehir, Turkey, 17 - 19 April 2019
- XXX. **Boron-added Pumice Brick Production: Determination of Physicomechanical and Chemical Properties**
ÇELİK A. G., SÜRDEM S., KIZILTAŞ R., DOYURAN H.
Seventh Bozok Science Workshop: Boron and Boron Containing Nanomaterialswith Applications, Yozgat, Turkey, 8 - 10 August 2018
- XXXI. **Raw Material to the Product: Boron**
SÜRDEM S.
9th International Industrial Minerals Symposium, İzmir, Turkey, 14 - 15 May 2015
- XXXII. **A Flow Injection-Chemiluminescence (FI-CL) System for Speciation of Chromium**
SÜRDEM S., VOLKAN M.
IV. Aegean Analytical Chemistry Days, Aydın, Turkey, 26 - 30 September 2004
- XXXIII. **Amino-Silika Reçinesi ile İnorganik Krom Türlerinin Seçici Olarak Ön-zenginleştirilmesi**
SÜRDEM S., VOLKAN M.
II. Ulusal Analitik Kimya Kongresi, Malatya, Turkey, 2 - 04 September 2004
- XXXIV. **Application of Computer Controlled Flow Injection System for On-Line Preconcentration, Speciation and Determination of Chromium**
SÜRDEM S., VOLKAN M.
III. Aegean Analytical Chemistry Days, Lesvos, Greece, 29 September - 03 October 2002

Patent

Yörükoğlu A., Cevher D., Sürdem S., PET ŞİŞE ATIKLARI KULLANILARAK ÇEVRE DOSTU YAPIŞTIRICI ÜRÜNÜN ÜRETİM YÖNTEMİ, Patent, CHAPTER C Chemistry; Metallurgy, The Invention Registration Number: 2019 19068 , Standard Registration, 2022

Yörükoğlu A., Sürdem S., Doyuran H., Kızıldaş R., Çelik A. G., İnşaat ve Yapı Endüstrisinde Kullanılacak Bir Yapı Malzemesi Üretim Yöntemi, Patent, CHAPTER E Constructed Constructions (Construction), The Invention Registration Number: 2018 13692 , Standard Registration, 2021

Yörükoğlu A., Sürdem S., Öztürk S., Borlu El Dezenfektanı, Patent, CHAPTER C Chemistry; Metallurgy, The Invention Registration Number: TR 2015 15509 A1 , Standard Registration, 2018, 2022

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