

# Dr. Öğr. Üyesi SÜMEYYE BÜYÜKKAZAZ

## Kişisel Bilgiler

İş Telefonu: [+90 228 214 2471](tel:+902282142471)

E-posta: [sumeyye.buyukkazaz@bilecik.edu.tr](mailto:sumeyye.buyukkazaz@bilecik.edu.tr)

Web: <https://avesis.bilecik.edu.tr/sumeyye.buyukkazaz>

## Uluslararası Araştırmacı ID'leri

ORCID: 0000-0002-8177-2365

Publons / Web Of Science ResearcherID: AAI-8214-2020

ScopusID: 56809420500

Yoksis Araştırmacı ID: 320725

## Eğitim Bilgileri

Doktora, Sakarya Üniversitesi, Fen Bilimleri Enstitüsü, Fizik (Dr), Türkiye 2015 - 2019

Ön Lisans, Sakarya Üniversitesi, Sakarya Sağlık Hizmetleri Meslek Yüksekokulu, Tıbbi Hizmetler Ve Teknikler Bölümü, Türkiye 2017 - 2018

Yüksek Lisans, Sakarya Üniversitesi, Fen Bilimleri Enstitüsü, Fizik (YI) (Tezli), Türkiye 2013 - 2015

Lisans, Dokuz Eylül Üniversitesi, Fen Fakültesi, Fizik Bölümü, Türkiye 2011 - 2013

## Yabancı Diller

Arapça, C2 Ustalık

## Yaptığı Tezler

Doktora, 6-metilpiridin-2-karboksilik asit içeren bazı geçiş metal komplekslerinin sentezi, yapı analizleri ve  $\alpha$ -glukozidaz enzimi üzerine etkilerinin incelenmesi, Sakarya Üniversitesi, Fen Bilimleri Enstitüsü, Fizik (Dr), 2019  
Yüksek Lisans, 1,3-tiyazolidin-2,4-dikarboksilat-Mn(II) kompleksinin 1,10-fenantrolin ile sentezi, spektroskopik karakterizasyonu ve DFT metoduyla incelenmesi, Sakarya Üniversitesi, Fen Bilimleri Enstitüsü, Fizik (YI) (Tezli), 2015

## Araştırma Alanları

Atom ve Moleküllerin Elektronik Yapısı Kuramı

## Akademik Unvanlar / Görevler

Dr. Öğr. Üyesi, Bilecik Şeyh Edebali Üniversitesi, Sağlık Hizmetleri Meslek Yüksekokulu, Tıbbi Hizmetler Ve Teknikler, 2023 - Devam Ediyor

## Verdiği Dersler

Oftalmik Lens Teorisi, Ön Lisans, 2022 - 2023, 2021 - 2022, 2020 - 2021  
Optik II, Ön Lisans, 2023 - 2024  
Mesleki İngilizce, Ön Lisans, 2022 - 2023, 2021 - 2022, 2020 - 2021  
Kontakt Lens Teorisi, Ön Lisans, 2022 - 2023  
Optisyenlik Laboratuvar I, Ön Lisans, 2022 - 2023, 2021 - 2022, 2020 - 2021  
İşletmede Mesleki Eğitim, Ön Lisans, 2022 - 2023  
Optik Aletler Bilgisi, Ön Lisans, 2023 - 2024, 2022 - 2023  
Staj, Ön Lisans, 2022 - 2023, 2021 - 2022  
Optisyenliğe Giriş, Ön Lisans, 2023 - 2024, 2022 - 2023  
Fizik Bilim Tarihi, Ön Lisans, 2023 - 2024, 2022 - 2023  
Optisyenlik Laboratuvar II, Ön Lisans, 2023 - 2024, 2022 - 2023  
Mesleki Terminoloji, Ön Lisans, 2023 - 2024  
Optik Mağaza Yönetimi, Ön Lisans, 2023 - 2024, 2022 - 2023  
Görme Testleri ve Refraksiyon, Ön Lisans, 2022 - 2023, 2020 - 2021  
İş Yeri Eğitimi, Ön Lisans, 2021 - 2022  
İş Yeri Uygulaması, Ön Lisans, 2021 - 2022

## SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

- I. **Novel Mn(II) and Zn(II) complexes of 6-bromopicolinic acid as a potential optical material: Synthesis, spectral characterizations, linear, and nonlinear optical properties and density functional theory calculations**  
Avcı D., Saeedi Y., Başoğlu A., Dege N., Altürk S., Tamer Ö., Atalay Y.  
Applied Organometallic Chemistry, cilt.35, sa.3, 2021 (SCI-Expanded)
- II. **Novel metal complexes containing 6-methylpyridine-2-carboxylic acid as potent  $\alpha$ -glucosidase inhibitor: synthesis, crystal structures, DFT calculations, and molecular docking**  
Avcı D., Altürk S., Sönmez F., Tamer Ö., Başoğlu A., Atalay Y., ZENGİN KURT B., Dege N.  
Molecular Diversity, cilt.25, sa.1, ss.171-189, 2021 (SCI-Expanded)
- III. **Synthesis, spectral properties,  $\alpha$ -glucosidase inhibition, second-order and third-order NLO parameters and DFT calculations of Cr(III) and V(IV) complexes of 3-methylpicolinic acid**  
Avcı D., Altürk S., Sönmez F., Tamer Ö., Başoğlu A., Atalay Y., ZENGİN KURT B., Dege N.  
Journal of Molecular Structure, cilt.1220, 2020 (SCI-Expanded)
- IV. **Synthesis, DFT calculations and molecular docking study of mixed ligand metal complexes containing 4,4'-dimethyl-2,2'-bipyridyl as  $\alpha$ -glucosidase inhibitors**  
Avcı D., Altürk S., Sönmez F., Tamer Ö., Başoğlu A., Atalay Y., ZENGİN KURT B.  
Journal of Molecular Structure, cilt.1205, 2020 (SCI-Expanded)
- V. **Synthesis, spectral properties, in vitro  $\alpha$ -glucosidase inhibitory activity and quantum chemical calculations of novel mixed-ligand M(II) complexes containing 1,10-phenanthroline**  
Avcı D., Altürk S., Sönmez F., Tamer Ö., Başoğlu A., Atalay Y., ZENGİN KURT B., Dege N.  
Applied Organometallic Chemistry, cilt.34, sa.4, 2020 (SCI-Expanded)
- VI. **Novel Cu(II), Co(II) and Zn(II) metal complexes with mixed-ligand: Synthesis, crystal structure,  $\alpha$ -glucosidase inhibition, DFT calculations, and molecular docking**  
Avcı D., Altürk S., Sönmez F., Tamer Ö., Başoğlu A., Atalay Y., ZENGİN KURT B., Dege N.  
Journal of Molecular Structure, cilt.1197, ss.645-655, 2019 (SCI-Expanded)
- VII. **A novel series of mixed-ligand M(II) complexes containing 2,2'-bipyridyl as potent  $\alpha$ -glucosidase inhibitor: synthesis, crystal structure, DFT calculations, and molecular docking**  
Avcı D., Altürk S., Sönmez F., Tamer Ö., Başoğlu A., Atalay Y., ZENGİN KURT B., Dege N.  
Journal of Biological Inorganic Chemistry, cilt.24, sa.5, ss.747-764, 2019 (SCI-Expanded)
- VIII. **A novel series of M(II) complexes of 6-methylpyridine-2-carboxylic acid with 4(5)methylimidazole: Synthesis, crystal structures,  $\alpha$ -glucosidase activity, density functional theory calculations and**

## **molecular docking**

Avcı D., Altürk S., Sönmez F., Tamer Ö., Başoğlu A., Atalay Y., ZENGİN KURT B., Dege N.  
Applied Organometallic Chemistry, cilt.33, sa.7, 2019 (SCI-Expanded)

- IX. **Two New Co(II) Complexes of Picolinate: Synthesis, Crystal Structure, Spectral Characterization,  $\alpha$ -Glucosidase Inhibition and TD/DFT Study**  
Altürk S., Avcı D., ZENGİN KURT B., Tamer Ö., Başoğlu A., Sönmez F., Atalay Y., Dege N.  
Journal of Inorganic and Organometallic Polymers and Materials, cilt.29, sa.4, ss.1265-1279, 2019 (SCI-Expanded)
- X. **A new dinuclear copper (II) complex of 2,5-Furandicarboxylic acid with 4(5)-Methylimidazole as a high potential  $\alpha$ -glucosidase inhibitor: Synthesis, Crystal structure, Cytotoxicity study, and TD/DFT calculations**  
Avcı D., Altürk S., Sönmez F., Tamer Ö., Başoğlu A., Atalay Y., ZENGİN KURT B., Öztürk D., Dege N.  
Applied Organometallic Chemistry, cilt.33, sa.3, 2019 (SCI-Expanded)
- XI. **Three novel Cu(II), Cd(II) and Cr(III) complexes of 6-Methylpyridine-2-carboxylic acid with thiocyanate: Synthesis, crystal structures, DFT calculations, molecular docking and  $\alpha$ -Glucosidase inhibition studies**  
Avcı D., Altürk S., Sönmez F., Tamer Ö., Başoğlu A., Atalay Y., ZENGİN KURT B., Dege N.  
Tetrahedron, cilt.74, sa.50, ss.7198-7208, 2018 (SCI-Expanded)
- XII. **1H-pyrazole-3-carboxylic acid: Experimental and computational study**  
Altürk S., Avcı D., Tamer Ö., Atalay Y.  
Journal of Molecular Structure, cilt.1164, ss.28-36, 2018 (SCI-Expanded)
- XIII. **Copper(II) complex with 6-methylpyridine-2-carboxylic acid: Experimental and computational study on the XRD, FT-IR and UV-Vis spectra, refractive index, band gap and NLO parameters**  
Altürk S., Avcı D., Başoğlu A., Tamer Ö., Atalay Y., Dege N.  
Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, cilt.190, ss.220-230, 2018 (SCI-Expanded)
- XIV. **Spectroscopic (FT-IR, 1H and 13C NMR) characterization and density functional theory calculations for(3- (2- (1-hydroxycyclohexyl) -2- (4-methoxyphenyl)ethyl) -2- (4-methylphenyl) - thiazolidin-4-one)**  
Toubal K., Boukabcha N., Tamer Ö., Benhalima N., Altürk S., Avcı D., Chouaih A., Atalay Y., Djafri A., Hamzaoui F.  
Journal of Molecular Structure, cilt.1147, ss.569-581, 2017 (SCI-Expanded)
- XV. **Solvent effect in implicit/explicit model on FT-IR, 1H, 13C and 19F NMR, UV-vis and fluorescence spectra, linear, second- and third-nonlinear optical parameters of 2-(trifluoromethyl)benzoic acid: Experimental and computational study**  
Avcı D., Altürk S., Tamer Ö., Kuşbazoğlu M., Atalay Y.  
Journal of Molecular Structure, cilt.1143, ss.116-126, 2017 (SCI-Expanded)
- XVI. **Conformational, spectroscopic and nonlinear optical investigations on 1-(4-chlorophenyl)-3-(4-chlorophenyl)-2-propen-1-one: a DFT study**  
Altürk S., Boukabcha N., Benhalima N., Tamer Ö., Chouaih A., Avcı D., Atalay Y., Hamzaoui F.  
Indian Journal of Physics, cilt.91, sa.5, ss.501-511, 2017 (SCI-Expanded)
- XVII. **Comparison of different hybrid DFT methods on structural, spectroscopic, electronic and NLO parameters for a potential NLO material**  
Altürk S., Avcı D., Tamer Ö., Atalay Y.  
Computational and Theoretical Chemistry, cilt.1100, ss.34-45, 2017 (SCI-Expanded)
- XVIII. **A cobalt (II) complex with 6-methylpicolinate: Synthesis, characterization, second- and third-order nonlinear optical properties, and DFT calculations**  
Altürk S., Avcı D., Tamer Ö., Atalay Y., Şahin O.  
Journal of Physics and Chemistry of Solids, cilt.98, ss.71-80, 2016 (SCI-Expanded)
- XIX. **Synthesis, spectroscopic characterization, second and third-order nonlinear optical properties, and DFT calculations of a novel Mn(II) complex**  
Altürk S., Tamer Ö., Avcı D., Atalay Y.  
Journal of Organometallic Chemistry, cilt.797, ss.110-119, 2015 (SCI-Expanded)

## Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar

- I. **SYNTHESIS, CRYSTAL STRUCTURE, SPECTRAL CHARACTERIZATION,  $\alpha$ -GLUCOSIDASE INHIBITION AND TD/DFT STUDY OF THE Cu (II) COMPLEX**  
S. A., AVCI D., SÖNMEZ F., TAMER Ö., BAŞOĞLU A., ATALAY Y., ZENGİN KURT B.  
3rd International Conference on Organic Electronic Material Technologies (OEMT2018), Kırklareli, Türkiye, 20 Eylül 2018 - 22 Eylül 2019
- II. **SYNTHESIS, CRYSTAL STRUCTURE, DFT CALCULATIONS, MOLECULAR DOCKING AND  $\alpha$ -GLUCOSIDASE INHIBITION STUDY OF THE Zn (II) COMPLEX**  
S. A., AVCI D., SÖNMEZ F., TAMER Ö., BAŞOĞLU A., ATALAY Y., ZENGİN KURT B., DEGE N.  
3rd International Conference on Organic Electronic Material Technologies (OEMT2018), Kırklareli, Türkiye, 20 - 22 Eylül 2018
- III. **SYNTHESIS, SPECTRAL CHARACTERIZATION,  $\alpha$ -GLUCOSIDASE INHIBITION AND TD/DFT STUDY OF THE Ni(II) COMPLEXES**  
S. A., AVCI D., SÖNMEZ F., TAMER Ö., BAŞOĞLU A., ATALAY Y.  
IRSETCONF, Belgrade, Sırbistan, 15 - 17 Aralık 2018
- IV. **CADMIUM (II) COMPLEX WITH 1H-PYRAZOLE-3-CARBOXYLIC ACID: A DFT STUDY**  
S. A., AVCI D., TAMER Ö., ATALAY Y.  
PROCEEDINGS OF THE TURKISH PHYSICAL SOCIETY 33ND INTERNATIONAL PHYSICS CONGRESS (TPS33), Bodrum, Türkiye, 6 - 10 Eylül 2017
- V. **1H-pyrazole-3-carboxylic acid: EXPERIMENTAL AND COMPUTATIONAL STUDY**  
S. A., AVCI D., TAMER Ö., ATALAY Y.  
PROCEEDINGS OF THE TURKISH PHYSICAL SOCIETY 33ND INTERNATIONAL PHYSICS CONGRESS (TPS33), Bodrum, Türkiye, 6 - 10 Eylül 2017
- VI. **DFT calculations on spectroscopic, structural and NLO properties of silver (I) complex with picolinamide**  
S. A., AVCI D., TAMER Ö., ATALAY Y.  
PROCEEDINGS OF THE TURKISH PHYSICAL SOCIETY 32ND INTERNATIONAL PHYSICS CONGRESS (TPS32), Bodrum, Turkey, Türkiye, 6 - 09 Eylül 2016, cilt.1815
- VII. **SPECTROSCOPIC PROPERTIES OF 2-(TRIFLUOROMETHYL)BENZOIC ACID: EXPERIMENTAL AND COMPUTATIONAL STUDY**  
S. A., AVCI D., TAMER Ö., ATALAY Y.  
PROCEEDINGS OF THE TURKISH PHYSICAL SOCIETY 32ND INTERNATIONAL PHYSICS CONGRESS (TPS32), Bodrum, Türkiye, 6 - 09 Eylül 2016
- VIII. **The second- and third- order nonlinear optical properties and electronic transition of a NLO chromophore: A DFT study**  
S. A., AVCI D., TAMER Ö., ATALAY Y.  
9TH INTERNATIONAL PHYSICS CONFERENCE OF THE BALKAN PHYSICAL UNION (BPU-9), Istanbul, Turkey, Türkiye, 24 - 27 Ağustos 2015, cilt.1722
- IX. **DFT calculations on spectroscopic and structural properties of a NLO chromophore**  
S. A., AVCI D., TAMER Ö., ATALAY Y.  
9TH INTERNATIONAL PHYSICS CONFERENCE OF THE BALKAN PHYSICAL UNION (BPU-9), Istanbul, Turkey, Türkiye, 24 - 27 Ağustos 2015, cilt.1722

## Desteklenen Projeler

Yeni 6-Metilpiridin-2-Karboksilik Asit İçeren Karışık Liganlı Farklı Metal Komplekslerin Sentezi, Yapılarının Detaylı Analizi Ve  $\alpha$ -Glukozidaz Enzim İnhibisyonunun In Vitro İncelenmesi, 2017 - 2019

Yükseköğretim Kurumları Destekli Proje, Yeni 1,3-Tiyazolidin-2,-4-Dikarboksilik Asit Komplekslerinin Sentezi, Yapılarının Aydınlatılması, Lineer Olmayan Optik Özellikleri ve Uyarılmış Seviye Elektronik Özelliklerinin Modellenmesi, 2013 - 2015

## **Metrikler**

Yayın: 28

Atf (Scopus): 532

H-İndeks (Scopus): 12

## **Kongre ve Sempozyum Katılımı Faaliyetleri**

3rd International Conference on Organic Electronic Material Technologies (OEMT2018), Katılımcı, Kırklareli, Türkiye, 2018

3rd International Conference on Organic Electronic Material Technologies (OEMT2018), Katılımcı, Kırklareli, Türkiye, 2018

9th INTERNATIONAL PHYSICS CONFERENCE OF THE BALKAN PHYSICAL UNION – BPU9, Katılımcı, İstanbul, Türkiye, 2015

9th INTERNATIONAL PHYSICS CONFERENCE OF THE BALKAN PHYSICAL UNION – BPU9, Katılımcı, İstanbul, Türkiye, 2015