

## Assoc. Prof. DUYGU İNCİ ÖZBAĞCI

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### International Researcher IDs

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Publons / Web Of Science ResearcherID: G-2201-2019

ScopusID: 55082306300

Yoksis Researcher ID: 321941

### Education Information

Doctorate, Bursa Uludağ University, FEN BİLİMLERİ ENSTİTÜSÜ, FEN BİLİMLERİ ENSTİTÜSÜ, Turkey 2013 - 2018

Postgraduate, Bursa Uludağ University, FEN BİLİMLERİ ENSTİTÜSÜ, FEN BİLİMLERİ ENSTİTÜSÜ, Turkey 2010 - 2013

Undergraduate, Bursa Uludağ University, FEN-EDEBİYAT FAKÜLTESİ, KİMYA, Turkey 2005 - 2009

### Dissertations

Doctorate, Bakır(II) ve palladyum(II) iyonlarının fenantrolin türevleri ve amino asitler ile oluşturduğu komplekslerin sentezi, karakterizasyonu, DNA/protein etkileşimlerinin ve biyolojik özelliklerinin araştırılması, Bursa Uludağ University, FEN BİLİMLERİ ENSTİTÜSÜ, FEN BİLİMLERİ ENSTİTÜSÜ, 2018

Postgraduate, Bakır(II) iyonunun L-amino asitler ve aromatik diiminler ile oluşturduğu komplekslerin sentezi, yapılarının aydınlatılması, kararlılık sabitlerinin ve DNA etkileşimlerinin araştırılması, Bursa Uludağ University, FEN BİLİMLERİ ENSTİTÜSÜ, FEN BİLİMLERİ ENSTİTÜSÜ, 2013

### Research Areas

Chemistry, Inorganic Chemistry, Bioinorganic Chemistry, Natural Sciences

### Academic Titles / Tasks

Associate Professor, Bursa Uludağ University, FEN-EDEBİYAT FAKÜLTESİ, KİMYA, 2022 - Continues

Associate Professor, Kocaeli University, Fen Edebiyat Fakültesi, Kimya, 2021 - 2022

Assistant Professor, Kocaeli University, Fen Edebiyat Fakültesi, Kimya, 2020 - 2021

### Advising Theses

Aydın R., İnci Özbağcı D., Aminoasit Schiff bazı ile fenantrolin türevi içeren bakır(II) komplekslerinin araştırılması, Postgraduate, B.GÜLTEKİN(Student), 2023

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

- I. **Novel Ni(II) Complexes as Minor Groove Binders: Crystal Structures, Biomolecular Interactions, Molecular Docking, and Biological Activities**  
İnci Özbağcı D.  
APPLIED ORGANOMETALLIC CHEMISTRY, vol.38, no.12, 2024 (SCI-Expanded)
- II. **A comprehensive study on synthesis and crystal structures of Cu(II) and Ni (II) complexes: In vitro and in silico evaluation of biomolecular interactions, antiproliferative activities and molecular docking**  
Ozbagcia D., Erdag S. I., Aydin I., AYDIN R., Zorlu Y., ARI F.  
JOURNAL OF MOLECULAR STRUCTURE, vol.1309, 2024 (SCI-Expanded)
- III. **A comparative study on the synthesis and crystal structures of Ni(II) complexes bearing tetradentate N<sub>2</sub>O<sub>2</sub> donor Schiff bases: biomolecular interactions, cytotoxicities and molecular docking**  
İnci Özbağcı D., Ilkar Erdagi S., Aydın İ., Aydın R., Zorlu Y., Arı F.  
NEW JOURNAL OF CHEMISTRY, vol.48, no.23, pp.10475-10496, 2024 (SCI-Expanded)
- IV. **New copper(II) complexes containing tryptophan based Schiff bases as promising antiproliferative agents on breast cancer cells**  
Gültekin B., İnci Özbağcı D., Aydın İ., Aydın R., Arı F., Zorlu Y.  
JOURNAL OF MOLECULAR STRUCTURE, vol.1301, 2024 (SCI-Expanded)
- V. **New copper (II) complexes bearing tryptophan-based Schiff bases and 2,2'-bipyridine: Crystal structures, DNA/BSA interactions and antiproliferative activities**  
Ozbagci D. I., Gultekin B., Aydin I., AYDIN R., ARI F., Zorlu Y.  
APPLIED ORGANOMETALLIC CHEMISTRY, vol.38, no.4, 2024 (SCI-Expanded)
- VI. **Crystal Structures and Biological Profiles of Novel Tridentate Schiff Bases Nickel (II) Complexes**  
Özbağcı D., Erdağ S. İ., Aydın İ., AYDIN R., ARI F., Zorlu Y.  
Applied Organometallic Chemistry, 2024 (SCI-Expanded)
- VII. **A potent drug candidature of Cu(II) pyrazino[2,3-f][1,10]phenanthroline complexes with bioactive ligands: synthesis, crystal structures, biomolecular interactions, radical scavenging and cytotoxicities**  
İNCİ D., AYDIN R., VATAN Ö., ZORLU Y.  
JOURNAL OF BIOMOLECULAR STRUCTURE & DYNAMICS, vol.39, no.18, pp.7194-7212, 2021 (SCI-Expanded)
- VIII. **Biomacromolecular interactions and radical scavenging activities of one-dimensional (1D) copper(II) glycinate coordination polymer**  
İNCİ D., AYDIN R., ZORLU Y.  
JOURNAL OF THE IRANIAN CHEMICAL SOCIETY, vol.18, no.11, pp.3017-3030, 2021 (SCI-Expanded)
- IX. **Cu(ii) complex with auxin (3-indoleacetic acid) and an aromatic planar ligand: synthesis, crystal structure, biomolecular interactions and radical scavenging activity**  
İNCİ D., AYDIN R., ZORLU Y.  
EUROPEAN BIOPHYSICS JOURNAL WITH BIOPHYSICS LETTERS, vol.50, no.5, pp.771-785, 2021 (SCI-Expanded)
- X. **Investigation on water soluble copper(II) mono-anionic glutamate complexes with planar aromatic ligands: synthesis, crystal structures, biomacromolecular interactions and radical scavenging activities**  
İNCİ D., AYDIN R., Zorlu Y.  
JOURNAL OF MOLECULAR STRUCTURE, vol.1225, 2021 (SCI-Expanded)
- XI. **Equilibria Studies on Nickel(II) Complexes with 1,10-Phenanthroline Derivatives and Some Amino Acids in Aqueous Solution**  
İNCİ D., AYDIN R.  
JOURNAL OF SOLUTION CHEMISTRY, vol.50, no.1, pp.128-146, 2021 (SCI-Expanded)
- XII. **NOO-type tridentate Schiff base ligand and its one-dimensional Cu(II) coordination polymer: Synthesis, crystal structure, biomacromolecular interactions and radical scavenging activities**

- İNÇİ D., AYDIN R., ZORLU Y.  
INORGANICA CHIMICA ACTA, vol.514, 2021 (SCI-Expanded)
- XIII. **A new ternary Cu (II) complex with 4,7-dimethyl-1,10-phenanthroline and NOO-type tridentate Schiff base ligand: Synthesis, crystal structure, biomacromolecular interactions, and radical scavenging activities**  
İNÇİ D.  
APPLIED ORGANOMETALLIC CHEMISTRY, vol.34, no.12, 2020 (SCI-Expanded)
- XIV. **Neocuproine Copper(II) Complexes with Bioactive Ligands in Aqueous Solution**  
İNÇİ D., AYDIN R.  
RUSSIAN JOURNAL OF INORGANIC CHEMISTRY, vol.65, no.14, pp.2033-2045, 2020 (SCI-Expanded)
- XV. **Temperature and methyl substitution effect on copper(II) complexes with biorelevant ligands and species distribution in aqueous solution**  
Senel P., İnci D., AYDIN R.  
PHYSICS AND CHEMISTRY OF LIQUIDS, vol.58, no.5, pp.636-650, 2020 (SCI-Expanded)
- XVI. **Antiproliferative activity of copper(II) glutamine complexes with N,N-donor ligands: Synthesis, characterization, potentiometric studies and DNA/BSA interactions**  
Kiraz S., İnci D., AYDIN R., VATAN Ö., ZORLU Y., ÇAVAŞ T.  
JOURNAL OF MOLECULAR STRUCTURE, vol.1194, pp.245-255, 2019 (SCI-Expanded)
- XVII. **Methyl substituent effect on one-dimensional copper(II) coordination polymers containing biologically active ligands: Synthesis, characterization, DNA interactions and cytotoxicities**  
Senel P., İnci D., AYDIN R., HURİYET H., ZORLU Y., ÇİNKİLİÇ N.  
APPLIED ORGANOMETALLIC CHEMISTRY, vol.33, no.10, 2019 (SCI-Expanded)
- XVIII. **Structures, hydrolysis, stabilities of palladium(II) complexes containing biologically active ligands and species distribution in aqueous solution**  
İnci D., AYDIN R.  
JOURNAL OF MOLECULAR STRUCTURE, vol.1187, pp.23-37, 2019 (SCI-Expanded)
- XIX. **Water-soluble binary and ternary palladium(II) complexes containing amino acids and intercalating ligands: synthesis, characterization, biomolecular interactions and cytotoxicities**  
İnci D., AYDIN R., VATAN Ö., ŞAHİN O., ÇİNKİLİÇ N.  
NEW JOURNAL OF CHEMISTRY, vol.43, no.12, pp.4681-4697, 2019 (SCI-Expanded)
- XX. **Interaction of a new copper(II) complex by bovine serum albumin and dipeptidyl peptidase-IV**  
İnci D., KÖSELER A., ZEYTÜNLÜOĞLU A., AYDIN R., ZORLU Y.  
JOURNAL OF MOLECULAR STRUCTURE, vol.1177, pp.317-322, 2019 (SCI-Expanded)
- XXI. **Cu (II) tyrosinate complexes containing methyl substituted phenanthrolines: Synthesis, X-ray crystal structures, biomolecular interactions, antioxidant activity, ROS generation and cytotoxicity**  
İnci D., AYDIN R., VATAN Ö., HURİYET H., ZORLU Y., ÇOŞUT B., ÇİNKİLİÇ N.  
APPLIED ORGANOMETALLIC CHEMISTRY, vol.33, no.1, 2019 (SCI-Expanded)
- XXII. **New binary copper(II) complexes containing intercalating ligands: DNA interactions, an unusual static quenching mechanism of BSA and cytotoxic activities**  
İnci D., AYDIN R., VATAN Ö., ZORLU Y., ÇİNKİLİÇ N.  
JOURNAL OF BIOMOLECULAR STRUCTURE & DYNAMICS, vol.36, no.15, pp.3878-3901, 2018 (SCI-Expanded)
- XXIII. **Newly synthesized Cu(II) pyrazino[2,3-f][1,10]phenanthroline complexes as potential anticancer candidates**  
İnci D., AYDIN R., HURİYET H., ZORLU Y., ÇİNKİLİÇ N.  
APPLIED ORGANOMETALLIC CHEMISTRY, vol.32, no.4, 2018 (SCI-Expanded)
- XXIV. **Potentiometric Studies on Complexation of Cu(II) Ion with Methyl/Nitro-Substituted 1,10-Phenanthrolines and Selected Amino Acids**  
İnci D., AYDIN R.  
JOURNAL OF SOLUTION CHEMISTRY, vol.46, no.1, pp.124-138, 2017 (SCI-Expanded)
- XXV. **Synthesis and crystal structures of novel copper(II) complexes with glycine and substituted phenanthrolines: reactivity towards DNA/BSA and in vitro cytotoxic and antimicrobial evaluation**

- Inci D., AYDIN R., VATAN Ö., SEVGİ T., YILMAZ D., ZORLU Y., YERLİ Y., ÇOŞUT B., DEMİRKAN E., ÇİNKİLİÇ N.  
JOURNAL OF BIOLOGICAL INORGANIC CHEMISTRY, vol.22, no.1, pp.61-85, 2017 (SCI-Expanded)
- XXVI. **Synthesis, crystal structure, stability studies, DNA/albumin interactions, and antimicrobial activities of two Cu(II) complexes with amino acids and 5-nitro-1,10-phenanthroline**  
Inci D., AYDIN R., SEVGİ T., ZORLU Y., DEMİRKAN E.  
JOURNAL OF COORDINATION CHEMISTRY, vol.70, no.3, pp.512-543, 2017 (SCI-Expanded)
- XXVII. **Affinity of a new copper(II) complex to DNA/BSA and antioxidant/radical scavenging activities: crystal structure of [Cu(4,7-diphenyl-1,10-phenanthroline)(leucine)(NO<sub>3</sub>)(H<sub>2</sub>O)]**  
Inci D., AYDIN R., ZORLU Y.  
JOURNAL OF COORDINATION CHEMISTRY, vol.69, no.18, pp.2677-2696, 2016 (SCI-Expanded)
- XXVIII. **Binary and ternary new water soluble copper(II) complexes of L-tyrosine and substituted 1,10-phenanthrolines: Effect of substitution on DNA interactions and cytotoxicities**  
Inci D., Aydın R., Vatan Ö., Yılmaz D., Mutlu Gençkal H., Zorlu Y., Çavaş T.  
SPECTROCHIMICA ACTA PART A-MOLECULAR AND BIOMOLECULAR SPECTROSCOPY, vol.145, pp.313-324, 2015 (SCI-Expanded)
- XXIX. **New water-soluble copper (II) complexes including 4,7-dimethyl-1,10-phenanthroline and L-tyrosine: Synthesis, characterization, DNA interactions and cytotoxicities**  
Inci D., Aydın R., Yılmaz D., Mutlu Gençkal H., Vatan Ö., Çinkılıç N., Zorlu Y.  
SPECTROCHIMICA ACTA PART A-MOLECULAR AND BIOMOLECULAR SPECTROSCOPY, vol.136, pp.761-770, 2015 (SCI-Expanded)
- XXX. **Synthesis, characterisation, and equilibrium studies of 1-(2-ethyl-1,2,3,4-tetrahydro-quinazolin-2-yl)-ethanone oxime and the copper(II) complex of its open-chain tautomer**  
Mutlu Gençkal H., Inci D., Aydın R., Irez G.  
RUSSIAN JOURNAL OF GENERAL CHEMISTRY, vol.84, no.11, pp.2240-2247, 2014 (SCI-Expanded)
- XXXI. **Stabilities of the Ternary Complexes of Copper(II) with Substituted 1,10-Phenanthrolines and Some Amino Acids in Aqueous Solution**  
Inci D., AYDIN R.  
JOURNAL OF SOLUTION CHEMISTRY, vol.43, no.4, pp.711-726, 2014 (SCI-Expanded)
- XXXII. **Potentiometric and Spectrophotometric Studies of the Complexation of Lanthanum(III) with Adrenaline, Noradrenaline, and Dopamine**  
AYDIN R., Inci D.  
JOURNAL OF CHEMICAL AND ENGINEERING DATA, vol.57, no.3, pp.967-973, 2012 (SCI-Expanded)

## Articles Published in Other Journals

- I. **5-Chloroanthranilic Acid Schiff Base: Crystal Structure, DNA/BSA Interactions, Molecular Docking and Antioxidant Activity**  
İnci Özbağcı D.  
Hacettepe Journal of Biology and Chemistry, vol.53, no.1, pp.17-28, 2025 (Peer-Reviewed Journal)
- II. **EQUILIBRIUM STUDIES ON Ni(II) and Cu(II) COMPLEXES with 4,7-DIMETHYL-1,10-PHENANTHROLINE and ACIDIC AMINO ACIDS in AQUEOUS SOLUTION**  
İNCİ D.  
Journal of the Turkish Chemical Society, Section A: Chemistry, vol.7, no.3, pp.775-788, 2020 (Scopus)

## Books & Book Chapters

- I. **RECENT ADVANCES IN DNA INTERACTIONS of METAL(II/III) COMPLEXES WITH ONNO-DONOR SCHIFF BASES**  
İnci Özbağcı D., Aydın R.

in: Academic Research and Reviews in Science and Mathematics, Prof. Hüsnüye Sağlıkler, Editor, Platanus Publishing, Ankara, pp.157-172, 2023

**II. FREE RADICAL SCAVENGING ACTIVITIES OF MIXED LIGAND CU (II) AMINO ACID COMPLEXES**

İnci Özbağcı D.

in: Research And Evaluations In Science And Mathematics, Prof. Dr. Hasan AKGÜL, Prof. Dr. Murat KÜTÜK, Editor, Gece Kitaplığı, Ankara, pp.1-14, 2023

**III. TERNARY METAL COMPLEXES CONTAINING N,N-DONOR ATOMS AND SCHIFF BASES DERIVED FROM AMINO ACIDS**

İnci Özbağcı D., Aydın R.

in: Research & Reviews in Science and Mathematics, Neslihan İyit, Hasan Hüseyin Doğan, Hasan Akgül, Editor, Gece Publishing, Ankara, pp.53-70, 2022

**IV. EXPERIMENTAL METHODS USED TO INVESTIGATE BSA BINDING ACTIVITIES OF METAL COMPLEXES İNCİ D., AYDIN R.**

in: Research & Reviews in Science and Mathematics, AKGÜL Hasan, Editor, Gece Publishing, Ankara, pp.97-111, 2021

**V. A REVIEW OF DNA BINDING ACTIVITIES OF METAL(II) COMPLEXES CONTAINING AROMATIC AMINO ACIDS AND INTERCALATING LIGANDS**

İNCİ D., AYDIN R.

in: NATURAL SCIENCES: METHODS AND APPLICATIONS, CETİNDERE Seda, Editor, IKSAD Publishing House, Ankara, pp.89-113, 2021

## Supported Projects

İnci Özbağcı D., Aydın R., Project Supported by Higher Education Institutions, ONNO Donör Ligandların Oluşturduğu Metal Komplekslerinin Araştırılması, 2022 - 2023

İnci Özbağcı D., Aydın R., Project Supported by Higher Education Institutions, Bakır(II), Nikel(II) ve Çinko(II) iyonlarının Sübstitüe Fenantrolinler ve Triptofan ile Oluşturduğu Komplekslerin Karakterizasyonu, Uludağ Üniversitesi, BAP, HDP(F)-2016/22, 2016 - 2017

İnci Özbağcı D., Aydın R., Çinkılıç N., Çavaş T., Vatan Ö., Yılmaz D., Şenel P., Project Supported by Higher Education Institutions, Bakır(II) Nikel(II) ve Çinko(II) iyonlarının Sübstitüe Fenantrolinler Triptofan ve Glutamin ile Oluşturduğu Komplekslerin Sentezi Karakterizasyonu Kararlılıklarının Kompleks DNA Etkileşimlerinin ve Biyolojik Aktivitelerinin Araştırılması, Uludağ Üniversitesi, BAP, OUAP(F)-2015/14, 2015 - 2017

İnci Özbağcı D., Aydın R., Çinkılıç N., Çavaş T., Mutlu Gençkal H., Vatan Ö., Yılmaz D., Project Supported by Higher Education Institutions, Cu(II) İyonunun L- Amino Asitler ve Fenantrolin Türevleri ile Oluşturduğu Karışık Ligand Komplekslerinin Sentezlenmesi Kompleks DNA Etkileşiminin ve Sitotoksitelerinin Araştırılması, Uludağ Üniversitesi, BAP, KUAP(F)- 2012/76, 2013 - 2016

İnci Özbağcı D., Aydın R., Irez G., Çinkılıç N., Mutlu Gençkal H., Pazarlı N., Project Supported by Higher Education Institutions, İki Değerli Metal İyonlarının Aromatik Aminler ve Katekol veya Amino Grubu İçeren Ligandlar ile Oluşturduğu Karışık Ligand Komplekslerinin Sentezlenmesi Yapılarının Kararlılıklarının ve Antikanser Aktivitelerinin Araştırılması, Uludağ Üniversitesi, BAP, OUAP(F)-2011/71, 2011 - 2015

İnci Özbağcı D., Mutlu Gençkal H., Aydın R., Irez G., Pazarlı N., Project Supported by Higher Education Institutions, Yeni Oksim Bileşiklerinin Sentezi ve Bazı Geçiş Metal İyonları ile Oluşturdukları İkili ve Karışık Ligand Kompleksleri, Uludağ Üniversitesi, BAP, KUAP(F)-2011/72, 2011 - 2014

İnci Özbağcı D., Aydın R., Özer U., Beğendi T., Project Supported by Higher Education Institutions, Katekolamin Türevi Ligandların Bazı Metal İyonları ile Oluşturduğu Koordinasyon Bileşiklerinin Kararlılıklarının İncelenmesi, Uludağ Üniversitesi, BAP, F-2006/62, 2006 - 2011

## Metrics

Publication: 83  
Citation (WoS): 385  
Citation (Scopus): 442  
H-Index (WoS): 13  
H-Index (Scopus): 15

## **Scholarships**

TÜBİTAK 2211-C Yurt İçi Öncelikli Alanlar Doktora Bursu, TUBİTAK, 2015 - 2017  
Türk Eğitim Vakfı (TEV) Doktora Bursu, Other Government Agencies, 2013 - 2015

## **Awards**

İnci Özbağcı D., Teşekkür Belgesi (2021 Akademik Performans), Kocaeli Üniversitesi, February 2022  
İnci Özbağcı D., En İyi Doktora Tezi, Bursa Uludağ Üniversitesi Fen Bilimleri Enstitüsü, June 2018