

Assoc. Prof. HANDE KARABIYIK

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International Researcher IDs

ScholarID: [uasDcQcAAAAJ](https://orcid.org/0000-0001-6180-2080)

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Publons / Web Of Science ResearcherID: 0-9745-2019

ScopusID: 57653668000

Yoksis Researcher ID: 120062

Education Information

Doctorate, Ondokuz Mayıs University, Institute Of Science, Fizik (Dr), Turkey 2004 - 2010

Postgraduate, Ondokuz Mayıs University, Institute Of Science, Fizik (Yl) (Tezli), Turkey 2000 - 2004

Undergraduate, Ondokuz Mayıs University, Faculty Of Arts And Sciences, Department Of Physics, Turkey 1995 - 2000

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, 3-etoksialisilaldehit türevi bazı Schiff bazlarının yapısal özelliklerinin deneysel x-ışını kırınımı ve kuramsal yöntemlerle incelenmesi, Ondokuz Mayıs University, Fen Bilimleri Enstitüsü, Fizik (Dr), 2010

Postgraduate, X-ışınları kırınımı ile C₂₃H₁₃N₂O, C₂₁H₁₄N₄O₂S VE C₂₂H₁₈Cl₂N₄ organik moleküllerinin yapı analizleri, Ondokuz Mayıs University, Fen Bilimleri Enstitüsü, Fizik (Yl) (Tezli), 2004

Research Areas

Physics, Atomic and Molecular Physics, Interdisciplinary Physics and Related Science and Technology Areas, Condensed Matter 1: Structural, Mechanical and Thermal Properties, Intensive Article 2: Electronic Structure, Electric, Magnetic and Optical Properties, Chemistry, Natural Sciences

Academic Titles / Tasks

Associate Professor, Dokuz Eylül University, Fen Fakültesi, Fizik Bölümü, 2018 - Continues

Lecturer PhD, Dokuz Eylül University, Fen Fakültesi, Fizik Bölümü, 2011 - 2018

Research Assistant, Ondokuz Mayıs University, Faculty Of Arts And Sciences, Department Of Physics, 2002 - 2010

Academic and Administrative Experience

Deputy Head of Department, Dokuz Eylul University, Fen Fakültesi, Fizik Bölümü, 2023 - Continues
Fakülte Yönetim Kurulu Üyesi, Dokuz Eylul University, Fen Fakültesi, Fizik Bölümü, 2022 - Continues
Bölüm Stratejik Plan Komisyonu Başkanı, Dokuz Eylul University, Fen Fakültesi, Fizik Bölümü, 2022 - Continues
Deputy Head of Department, Dokuz Eylul University, Fen Fakültesi, Fizik Bölümü, 2022 - 2022

Courses

Periyodik Olmayan Kristaller, Postgraduate, 2021 - 2022
Fizik 2, Undergraduate, 2021 - 2022, 2019 - 2020, 2018 - 2019
Atom ve Molekül Fiziği, Undergraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021
Fizik 1, Undergraduate, 2020 - 2021
Fizik 1, Undergraduate, 2019 - 2020, 2017 - 2018, 2016 - 2017, 2014 - 2015
Fizik 2, Undergraduate, 2017 - 2018
Fizik 2, Undergraduate, 2016 - 2017
Fizik 1, Undergraduate, 2017 - 2018

Advising Theses

KARABIYIK H., Determination of HOMHED structural aromaticity index parameters of elements in group-15 and group-16, Postgraduate, E.KANAL(Student), 2016

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Synthesis and Characterization of Piano-Stool Ruthenium(II)-Arene Complexes of Isatin Schiff Bases: Cytotoxicity and DNA Intercalation.**
Karabiyik H., Karaer Tunçay A., İlhan S., Atmaca H., Türkmen H.
ACS omega, vol.9, no.17, pp.19136-19147, 2024 (SCI-Expanded)
- II. **Cell Death Mechanism of Organometallic Ruthenium(II) and Iridium(III) Arene Complexes on HepG2 and Vero Cells**
KAVUKCU S. B., Ensarioğlu H. K., KARABIYIK H., Vatansever H. S., Türkmen H.
ACS Omega, vol.8, no.40, pp.37549-37563, 2023 (SCI-Expanded)
- III. **Synthesis, characterization and antimicrobial properties of silver complexes derived from 5,6-Dimethylbenzimidazol-2-ylidene**
Atalay Çetinkaya E., KOÇ A., Kübra Koç H., KARABIYIK H., KARABIYIK H., Üstün E., ÖZDEMİR İ.
Polyhedron, vol.237, 2023 (SCI-Expanded)
- IV. **Pd-NHC complex catalyzed C-H bond activation reactions of caffeine and 2-isobutylthiazole**
Bugday N., Khan S., Yasar S., Bulut F., Boulebd H., Karabiyik H., Karabiyik H., Oz E., Rehman A. U., Ozdemir I.
MOLECULAR CATALYSIS, vol.530, 2022 (SCI-Expanded)
- V. **Crystal structure, optical properties, spectroscopic characterization and density functional theory studies of a new rhodium (i)-imidazolidin-2-ylidene complexes: Synthesis, characterization and cytotoxic properties**
KARACA E. Ö., ÇİFTÇİ O., ÖZDEMİR İ., KARABIYIK H., KARABIYIK H., Guerbuez N., ÖZDEMİR İ., Mansour L., Youssef A., Hamdi N.
INORGANICA CHIMICA ACTA, vol.537, 2022 (SCI-Expanded)
- VI. **C(acyl)-C(sp²) and C(sp²)-C(sp²) Suzuki-Miyaura cross-coupling reactions using nitrite-functionalized NHC palladium complexes**
Cakir S., KAVUKCU S. B., KARABIYIK H., Rethinam S., TÜRKMEN H.
RSC ADVANCES, vol.11, no.60, pp.37684-37699, 2021 (SCI-Expanded)

- VII. **Cytotoxic activity and apoptosis induction by a series Ag(I)-NHC complexes on human breast cancer cells and non-tumorigenic epithelial cell line**
KUTLU T., Yildirim I., KARABIYIK H., KILINÇLI A., TEKEDERELİ İ., GÖK Y., DİKMEN M., AKTAŞ A.
JOURNAL OF MOLECULAR STRUCTURE, vol.1228, 2021 (SCI-Expanded)
- VIII. **Arylation of heterocyclic compounds by benzimidazole-based N-heterocyclic carbene-palladium(II) complexes**
ŞAHİN N., GÜRBÜZ N., KARABIYIK H., KARABIYIK H., ÖZDEMİR İ.
JOURNAL OF ORGANOMETALLIC CHEMISTRY, vol.907, 2020 (SCI-Expanded)
- IX. **Enhanced pi-back-donation resulting in the trans labilization of a pyridine ligand in an N-heterocyclic carbene (NHC) Pd-II precatalyst: a case study**
KARABIYIK H., YİĞİT B., YİĞİT M., ÖZDEMİR İ., KARABIYIK H.
ACTA CRYSTALLOGRAPHICA SECTION C-STRUCTURAL CHEMISTRY, vol.75, pp.941-958, 2019 (SCI-Expanded)
- X. **Geometry dependence of electron donating or accepting abilities of amine groups in 4,4'-disulfanediybis(methylene)dithiazol-2-amine: Pyramidal versus planar**
KARABIYIK H., KIRILMIŞ C., KARABIYIK H.
JOURNAL OF MOLECULAR STRUCTURE, vol.1141, pp.650-659, 2017 (SCI-Expanded)
- XI. **Effects of pnictogen and chalcogen bonds on the aromaticities of carbazole-like and dibenzofuran-like molecular skeletons: Cambridge Crystallographic Data Centre (CCDC) Study**
KARABIYIK H., SEVİNÇEK R., KARABIYIK H.
JOURNAL OF PHYSICAL ORGANIC CHEMISTRY, vol.28, no.7, pp.490-496, 2015 (SCI-Expanded)
- XII. **Supramolecular aromaticity**
KARABIYIK H., SEVİNÇEK R., KARABIYIK H.
JOURNAL OF MOLECULAR STRUCTURE, vol.1064, pp.135-149, 2014 (SCI-Expanded)
- XIII. **pi-Cooperativity effect on the base stacking interactions in DNA: is there a novel stabilization factor coupled with base pairing H-bonds?**
KARABIYIK H., SEVİNÇEK R., KARABIYIK H.
PHYSICAL CHEMISTRY CHEMICAL PHYSICS, vol.16, no.29, pp.15527-15538, 2014 (SCI-Expanded)
- XIV. **Changes in ligating abilities of the singlet and triplet states of normal, abnormal and remote N-heterocyclic carbenes depending on their aromaticities**
SEVİNÇEK R., KARABIYIK H., KARABIYIK H.
JOURNAL OF MOLECULAR MODELING, vol.19, no.12, pp.5327-5341, 2013 (SCI-Expanded)
- XV. **Supramolecular chirality-sensing DNA-mimicry of a norbornane derivative decorated with isoxazoline and methylpyrrolidine-2,5-dione ring**
Yakali G., KARABIYIK H., KARABIYIK H., GÖKSU G., AYGÜN M., Ocal N., Garcia-Granda S.
JOURNAL OF MOLECULAR STRUCTURE, vol.1041, pp.164-174, 2013 (SCI-Expanded)
- XVI. **Hydrogen-bridged chelate ring-assisted pi-stacking interactions**
KARABIYIK H., KARABIYIK H., OCAK İSKELELİ N.
ACTA CRYSTALLOGRAPHICA SECTION B-STRUCTURAL SCIENCE CRYSTAL ENGINEERING AND MATERIALS, vol.68, pp.71-79, 2012 (SCI-Expanded)
- XVII. **Anchor Effect on Pedal Motion Observed in Crystal Phase of an Azobenzene Derivative**
KARABIYIK H., Petek H., OCAK İSKELELİ N., Albayrak C., AĞAR E.
JOURNAL OF CHEMICAL CRYSTALLOGRAPHY, vol.41, no.11, pp.1642-1648, 2011 (SCI-Expanded)
- XVIII. **Aromaticity balance, pi-electron cooperativity and H-bonding properties in tautomerism of salicylideneaniline: the quantum theory of atoms in molecules (QTAIM) approach**
KARABIYIK H., SEVİNÇEK R., Petek H., AYGÜN M.
JOURNAL OF MOLECULAR MODELING, vol.17, no.6, pp.1295-1309, 2011 (SCI-Expanded)
- XIX. **The proton transfer process observed in the structure analysis and DFT calculations of (E)-2-ethoxy-6-[(2-methoxyphenylimino)methyl]phenol**
Petek H., Albayrak C., ODABAŞOĞLU M., Senel I., BÜYÜKGÜNGÖR O.
STRUCTURAL CHEMISTRY, vol.21, no.4, pp.681-690, 2010 (SCI-Expanded)
- XX. **Structural and aromatic aspects for tautomerism of (Z)-6-((4-bromophenylamino)methylene)-2,3-**

dihydroxycyclohexa-2,4-dienone

KARABIYIK H., Petek H., OCAK İSKELELİ N., Albayrak C.

STRUCTURAL CHEMISTRY, vol.20, no.6, pp.1055-1065, 2009 (SCI-Expanded)

- XXI. **Crystallographic and conformational analysis of two novel trans-azo benzene compounds**
KARABIYIK H., Petek H., OCAK İSKELELİ N., Albayrak C.
STRUCTURAL CHEMISTRY, vol.20, no.5, pp.903-910, 2009 (SCI-Expanded)
- XXII. **Crystallographic and Conformational Analysis of [(Z)-2-ethoxy-6-[(2-hydroxyphenylamino)methylene]cyclohexa-2,4-dienone]**
Petek H., Albayrak C., Odabasoglu M., Senel I., BÜYÜKGÜNGÖR O.
JOURNAL OF CHEMICAL CRYSTALLOGRAPHY, vol.38, no.12, pp.901-905, 2008 (SCI-Expanded)
- XXIII. **An intermediate structure trapped in solid-state tautomerization process of (E)-4-[(4-chlorophenylimino)methyl]benzene-1,2,3-triol**
KARABIYIK H., OCAK İSKELELİ N., Petek H., Albayrak C., AĞAR E.
JOURNAL OF MOLECULAR STRUCTURE, vol.873, no.1-3, pp.130-136, 2008 (SCI-Expanded)
- XXIV. **Crystallographic and conformational analyses of zwitterionic form of (E)-2-methoxy-6-[(2-morpholinoethylimino)methyl]phenolate**
Petek H., Albayrak C., Iskeleli N. O., Agar E., Senel I.
JOURNAL OF CHEMICAL CRYSTALLOGRAPHY, vol.37, no.4, pp.285-290, 2007 (SCI-Expanded)
- XXV. **(E)-2-{1-[(4-Ethoxyphenyl)imino]ethyl}phenol**
Petek H., Albayrak C., Agar E., Iskeleli N. O., Senel I.
ACTA CRYSTALLOGRAPHICA SECTION E-STRUCTURE REPORTS ONLINE, vol.63, 2007 (SCI-Expanded)
- XXVI. **(E)-4-(p-Tolyldiazenyl)phenol**
Petek H., Ersahin F., Albayrak C., Agar E., Senel I.
ACTA CRYSTALLOGRAPHICA SECTION E-STRUCTURE REPORTS ONLINE, vol.62, 2006 (SCI-Expanded)
- XXVII. **PM3 semiempirical study and its comparison with X-ray crystal structure of 4-[2-methyl-4-(4-methoxyphenylazo)] phenoxyphthalonitrile**
Iskeleli N. O., KARABIYIK H., Albayrak C., Petek H., Agar E.
JOURNAL OF CHEMICAL CRYSTALLOGRAPHY, vol.36, no.11, pp.709-714, 2006 (SCI-Expanded)
- XXVIII. **(Z)-6-[(2-Fluorophenyliminio)methylene]2,3-dihydroxyphenolate**
Petek H., Albayrak C., Agar E., Kalkan H.
ACTA CRYSTALLOGRAPHICA SECTION E-CRYSTALLOGRAPHIC COMMUNICATIONS, vol.62, 2006 (SCI-Expanded)
- XXIX. **(E)-4-[(4-chlorophenyl)diazenyl]-2-isopropylphenol**
Atalay S., Petek H., Iskeleli N. O., Agar E.
ACTA CRYSTALLOGRAPHICA SECTION E-CRYSTALLOGRAPHIC COMMUNICATIONS, vol.62, 2006 (SCI-Expanded)
- XXX. **Dimethyl 5-(3,4-dicyano-phenoxy)isophthalate**
Petek H., Akdemir N., Agar E., Gumrukcuoglu I., Senel I.
ACTA CRYSTALLOGRAPHICA SECTION E-STRUCTURE REPORTS ONLINE, vol.62, 2006 (SCI-Expanded)
- XXXI. **(E)-2-[(2-morpholinoethylimino)methyl]phenol**
Petek H., Albayrak C., Iskeleli N., Agar E., Senel I.
ACTA CRYSTALLOGRAPHICA SECTION E-CRYSTALLOGRAPHIC COMMUNICATIONS, vol.61, 2005 (SCI-Expanded)
- XXXII. **Propyl 4-(3,4-dicyanophenoxy)benzoate**
Petek H., Akdemir N., Kantar C., Agar E., Senel I.
ACTA CRYSTALLOGRAPHICA SECTION E-CRYSTALLOGRAPHIC COMMUNICATIONS, vol.61, 2005 (SCI-Expanded)
- XXXIII. **4-Diphenylmethoxyphthalonitrile**
Petek H., Akdemir N., Agar E., ÖZİL M., Senel I.
ACTA CRYSTALLOGRAPHICA SECTION E-STRUCTURE REPORTS ONLINE, vol.60, 2004 (SCI-Expanded)
- XXXIV. **4-(2,4-dichlorobenzylamino)-3-phenyl-5-p-tolyl-4H-1,2,4-triazole**
Petek H., Senel I., BEKİRCAN O., Agar E., ŞAŞMAZ S.
ACTA CRYSTALLOGRAPHICA SECTION E-STRUCTURE REPORTS ONLINE, vol.60, 2004 (SCI-Expanded)
- XXXV. **4,4'-(4,4'-Thiodiphenoxy)diphthalonitrile**
Petek H., Akdemir N., ÖZİL M., Agar E., Senel I.

XXXVI. **4-(anthracen-9-ylmethoxy)phthalonitrile**

Petek H., Isik S., Akdemir N., Kantar C., Agar E., Senel I.

ACTA CRYSTALLOGRAPHICA SECTION E-STRUCTURE REPORTS ONLINE, vol.60, 2004 (SCI-Expanded)

Refereed Congress / Symposium Publications in Proceedings

- I. **Aromaticity balance pi electron cooperativity and H bonding properties in tautomerism of salicylideneaniline**
KARABIYIK H., SEVİNÇEK R., KARABIYIK H., AYGÜN M.
3rd Turkish Crystallographic Meeting, İzmir, Turkey, 7 - 09 June 2012
- II. **Hydrogen bridged chelate ring assisted pi stacking interactions**
KARABIYIK H., KARABIYIK H., OCAK İSKELELİ N.
3rd Turkish Crystallographic Meeting, İzmir, Turkey, 7 - 09 June 2012
- III. **The proton transfer process observed in structure analysis and DFT calculations of E 2 Ethoxy 6 2 methoxyphenylimino methyl phenol**
KARABIYIK H., ALBAYRAK KAŞTAŞ Ç., ODABAŞOĞLU M., ŞENEL İ., BÜYÜKGÜNGÖR O.
Chemical Physisc Conference VIII, İstanbul, Turkey, 24 - 25 April 2008
- IV. **Molecular and Crystal Structures of E 2 2 Morpholinoethylimino methyl phenol I and E 2 Methoxy 6 2 Morpholinoethylimino methyl phenol II**
KARABIYIK H., ALBAYRAK KAŞTAŞ Ç., OCAK İSKELELİ N., AĞAR E., ŞENEL İ.
2nd Turkish Crystallographic Meeting, Kayseri, Turkey, 17 - 19 May 2006
- V. **Molecular and Crystal Structures of Methyl 4 2 chloro 4 5 dicyano phenoxy 3 5 dimethoxybenzoate I and Dimethyl 5 3 4 dicyanophenoxy isophthalate II**
KARABIYIK H., AKDEMİR N., AĞAR E., İsmail G., ŞENEL İ.
2nd Turkish Crystallographic Meeting, Kayseri, Turkey, 17 - 19 May 2006
- VI. **4 4 4 4 tiyodifenoksi diftalonitrilin Kristal ve Molekül Yapısının Analizi**
KARABIYIK H., AKDEMİR N., ÖZİL M., AĞAR E., ŞENEL İ.
1. Ulusal Kristalografi Toplantısı, Samsun, Turkey, 22 - 24 April 2004

Metrics

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Citation (Scopus): 323

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H-Index (Scopus): 11