

# Prof. FİLİZ BETÜL KAYNAK

## Personal Information

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## Education Information

Doctorate, Hacettepe University, Mühendislik Fakültesi, Fizik Mühendisliği, Turkey 1996 - 2003

Postgraduate, Hacettepe University, Mühendislik Fakültesi, Fizik Mühendisliği, Turkey 1993 - 1996

Undergraduate, Hacettepe University, Mühendislik Fakültesi, Fizik Mühendisliği, Turkey 1986 - 1992

## Foreign Languages

English, B2 Upper Intermediate

## Dissertations

Doctorate, Bazı organik kristallerin molekül yapılarının ve moleküler özelliklerinin x-ışınları kırınımı ve kuantum mekaniksel hesaplama yöntemleri ile incelenmesi, Hacettepe Üniversitesi, Mühendislik Fakültesi, Fizik Mühendisliği Bölümü, 2003

Postgraduate, Geçirme x ışınları toz kırınım metresi için yüksek sıcaklık (293-1023 K) fırın tasarımı ve C19H28O2, C13H8CINO2Ni.C6H13N tek kristallerinin yapı analizleri, Hacettepe Üniversitesi, Mühendislik Fakültesi, Fizik Mühendisliği Bölümü, 1996

## Research Areas

Physics, Condensed Matter 1: Structural, Mechanical and Thermal Properties, Structure of Liquids and Solids; Crystallography, Surfaces, Interfaces, Thin Films and Nanosystems, Natural Sciences

## Academic Titles / Tasks

Professor, Hacettepe University, Mühendislik Fakültesi, Fizik Mühendisliği Bölümü, 2013 - Continues

Associate Professor, Hacettepe University, Mühendislik Fakültesi, Fizik Mühendisliği Bölümü, 2008 - 2013

Research Assistant, Hacettepe University, Mühendislik Fakültesi, Fizik Mühendisliği Bölümü, 1993 - 2008

## Academic and Administrative Experience

Hacettepe Üniversitesi, Mühendislik Fakültesi, Fizik Mühendisliği Bölümü, 2016 - Continues

Hacettepe Üniversitesi, Fen Bilimleri Enstitüsü, Nükleer Enerji Mühendisliği (YI) (Tezli), 2012 - 2013

## Advising Theses

KAYNAK F. B. , Galyum katkılı çinko oksit ince filmlerin karakterizasyonu ve üretim parametrelerinin ince filmlere olan etkilerinin incelenmesi, Postgraduate, E.KAHVECI(Student), 2017

KAYNAK F. B. , 2-pirazolin ve hidrazon yapısı içeren bazı organik moleküllerin yapılarının x-ışını kristalografisi ve kuramsal hesaplama yöntemleriyle incelenmesi, Postgraduate, E.DEDECENGİZ(Student), 2015

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

- I. **New 2-Pyrazoline and Hydrazone Derivatives as Potent and Selective Monoamine Oxidase A Inhibitors.**  
Salgin-Goksen U., Telli G., Erikci A., Dedecengiz E., Tel B. C. , Kaynak F. B. , Yelekçi K., Uçar G., Gökhan Kelekçi N.  
Journal of medicinal chemistry, vol.64, no.4, pp.1989-2009, 2021 (Journal Indexed in SCI Expanded)
- II. **Synthesis and structural characterization of 3-[1-[4-(2-methylpropyl)phenyl] ethyl]-6-(4-fluorophenyl)-1,2,4-triazolo[3,4-b]-1,3,4-thiadiazole**  
Gundogdu G., KARAYEL A., AYTAÇ S. P. , TOZKOPARAN KÖPRÜCÜ B., KAYNAK F. B.  
POWDER DIFFRACTION, vol.34, no.4, pp.325-330, 2019 (Journal Indexed in SCI)
- III. **Discovery of new azoles with potent activity against Candida spp. and Candida albicans biofilms through virtual screening**  
SARI S., KART D., Ozturk N., KAYNAK F. B. , Gencil M., Taskor G., KARAKURT A., Sarac S., Essiz S., DALKARA S.  
EUROPEAN JOURNAL OF MEDICINAL CHEMISTRY, vol.179, pp.634-648, 2019 (Journal Indexed in SCI)
- IV. **Synthesis and anticonvulsant screening of 1,2,4-triazole derivatives**  
SARI S., KAYNAK F. B. , DALKARA S.  
Pharmacological Reports, vol.70, no.6, pp.1116-1123, 2018 (Journal Indexed in SCI)
- V. **Structure elucidation of 3-[1-(6-methoxy-2-naphtyl)ethyl]-6-(2,4-dichlorophenyl)-7H-1,2,4-triazolo[3,4-b]-1,3,4-thiadiazine, C<sub>23</sub>H<sub>18</sub>Cl<sub>2</sub>N<sub>4</sub>O<sub>5</sub> from synchrotron X-ray powder diffraction**  
GÜNDOĞDU G., AYTAÇ S. P. , MELANİE M., TOZKOPARAN B., KAYNAK F. B.  
Powder Diffraction, vol.34, pp.271-278, 2017 (Journal Indexed in SCI Expanded)
- VI. **Structure determination of two structural analogs, named 3-[1-(2-fluoro-4-biphenyl)ethyl]-6-(4-fluorophenyl)-1,2,4-triazolo[3,4-b]-1,3,4-thiadiazole (C<sub>23</sub>H<sub>16</sub>F<sub>2</sub>N<sub>4</sub>S) and 3-[1-(2-fluoro-4-biphenyl)ethyl]-6-(4-chlorophenyl)-1,2,4-triazolo[3,4-b]-1,3,4-thiadiazole (C<sub>23</sub>H<sub>16</sub>ClF<sub>2</sub>N<sub>4</sub>S) by synchrotron X-ray powder diffraction**  
GÜNDOĞDU G., AYTAÇ S. P. , MELANİE M., TOZKOPARAN B., KAYNAK F. B.  
Powder Diffraction, vol.32, pp.279-289, 2017 (Journal Indexed in SCI Expanded)
- VII. **Combined spectroscopic, XRD crystal structure and DFT studies on 2-(ethylthio)pyrimidine-4,6-diamine**  
AKTAN E., Babur B., SEFEROĞLU N., ÇATIKKAŞ B., KAYNAK F. B. , SEFEROĞLU Z.  
JOURNAL OF MOLECULAR STRUCTURE, vol.1145, pp.152-159, 2017 (Journal Indexed in SCI)
- VIII. **New Anti-Seizure (Arylalkyl)azole Derivatives: Synthesis, In Vivo and In Silico Studies**  
SARI S., DALKARA S., KAYNAK F. B. , REYNISSON J., Sarac S., KARAKURT A.  
ARCHIV DER PHARMAZIE, vol.350, no.6, 2017 (Journal Indexed in SCI)
- IX. **New (arylalkyl)azole derivatives showing anticonvulsant effects could have VGSC and/or GABA(A)R affinity according to molecular modeling studies**  
SARI S., KARAKURT A., USLU H., KAYNAK F. B. , Calis U., DALKARA S.  
EUROPEAN JOURNAL OF MEDICINAL CHEMISTRY, vol.124, pp.407-416, 2016 (Journal Indexed in SCI)
- X. **Crystal structure determination of two novel 1,2,4-triazolo[3,4-b]-1,3,4-thiadiazine and -thiadiazole derivatives by XRPD method**  
KAYNAK F. B. , Gundogdu G., Muller M., ÖZBEY S.  
ACTA CRYSTALLOGRAPHICA A-FOUNDATION AND ADVANCES, vol.72, 2016 (Journal Indexed in SCI)
- XI. **Purification, structural characterization and homology modeling of a novel neurotoxic peptide (Acra3) from the scorpion Androctonus crassicauda**

ÖZBEY S., KOÇAK D., KAYNAK F. B. , ÇALIŞKAN F.

ACTA CRYSTALLOGRAPHICA A-FOUNDATION AND ADVANCES, vol.71, 2015 (Journal Indexed in SCI)

- XII. **Three novel compounds of 5-trifluoromethoxy-1H-indole-2,3-dione 3-thiosemicarbazone: Synthesis, crystal structures and molecular interactions**  
KAYNAK F. B. , ÖZBEY S., Karali N.  
JOURNAL OF MOLECULAR STRUCTURE, vol.1049, pp.157-164, 2013 (Journal Indexed in SCI)
- XIII. **Hetarylazoidoles 2. Spectroscopic and structural investigation of new benzothiazolylazo indole dyes**  
Seferoglu Z., KAYNAK F. B. , Ertan N., ÖZBEY S.  
JOURNAL OF MOLECULAR STRUCTURE, vol.1047, pp.22-30, 2013 (Journal Indexed in SCI)
- XIV. **Synthesis of 3,6-disubstituted 7H-1,2,4-triazolo[3,4-b]-1,3,4-thiadiazines as novel analgesic/anti-inflammatory compounds**  
AYTAÇ S. A. , Tozkoparan B., KAYNAK F. B. , Aktay G., Goektas O., Uenuevar S.  
EUROPEAN JOURNAL OF MEDICINAL CHEMISTRY, vol.44, no.11, pp.4528-4538, 2009 (Journal Indexed in SCI)
- XV. **The Ambiguous Solutions from Different Automatic Structure Solution Programs**  
KAYNAK F. B. , Eriksson L.  
ACTA CRYSTALLOGRAPHICA A-FOUNDATION AND ADVANCES, vol.65, 2009 (Journal Indexed in SCI)
- XVI. **Synthesis of highly functionalized BEDT-TTF analogues incorporating 1,4-dithiin rings from 1,8-diketones**  
ERTAS E., KAYNAK F. B. , ÖZBEY S., Osken I., Öztürk T.  
TETRAHEDRON, vol.64, no.46, pp.10581-10589, 2008 (Journal Indexed in SCI)
- XVII. **Molecular structure of 2-methylamino-5-[(5-methyl-2-benzoxazolinone-3-yl)methyl]-1,3,4-thiadiazole dihydrophosphate: a combined X-ray crystallographic and ab initio study**  
KAYNAK F. B. , Eriksson L., Salgin-Goksen U., GÖKHAN KELEKÇİ N.  
STRUCTURAL CHEMISTRY, vol.19, no.5, pp.757-764, 2008 (Journal Indexed in SCI)
- XVIII. **Synthesis and crystal structure of 1-benzyl-2-(4-benzyloxyphenyl)-5,6-dichloro-1H-benzimidazole**  
KAYNAK F. B. , ÖZBEY S., Tuncbilek M., Alp M.  
STRUCTURAL CHEMISTRY, vol.19, no.3, pp.477-480, 2008 (Journal Indexed in SCI)
- XIX. **Synthesis and antioxidant properties of novel N-methyl-1,3,4-thiadiazol-2-amine and 4-methyl-2H-1,2,4-triazole-3(4H)-thione derivatives of benzimidazole class**  
Kus C., Ayhan-Kilcigil G., ÖZBEY S., KAYNAK F. B. , Kaya M., Coban T., Can-Eke B.  
BIOORGANIC & MEDICINAL CHEMISTRY, vol.16, no.8, pp.4294-4303, 2008 (Journal Indexed in SCI)
- XX. **2-[2-(p-Chlorophenyl)benzimidazol-1-ylmethyl]5-(2-fluoroanilino)-1,3,4-thiadiazole**  
KAYNAK F. B.  
ACTA CRYSTALLOGRAPHICA SECTION E-CRYSTALLOGRAPHIC COMMUNICATIONS, vol.63, 2007 (Journal Indexed in SCI)
- XXI. **Crystal Structures and Interactions in Packing of Novel Thiadiazolyl - and Triazolyl-benzimidazole Derivatives**  
KAYNAK F. B. , ÖZBEY S., KILCIGİL G., KUŞ C.  
ACTA CRYSTALLOGRAPHICA A-FOUNDATION AND ADVANCES, vol.63, 2007 (Journal Indexed in SCI)
- XXII. **Design and synthesis of some new thiazolo[3,2-b]-1,2,4-triazole-5(6H)-ones substituted with flurbiprofen as anti-inflammatory and analgesic agents**  
DOĞDAŞ E., TOZKOPARAN B., KAYNAK F. B. , ERİKSSON L., KUPELİ E., YEŞİLADA E., Ertan M.  
ARZNEIMITTEL-FORSCHUNG-DRUG RESEARCH, vol.57, no.4, pp.196-202, 2007 (Journal Indexed in SCI)
- XXIII. **Design and synthesis of some new thiazolo[3,2-b]-1,2,4-triazole-5(6H)-ones substituted with flurbiprofen as anti-inflammatory and analgesic agents**  
DOĞDAŞ E., Tozkoparan B., Kaynak F. B. , ERİKSSON L., KUPELİ E., YESİLADA E., Ertan M.  
ARZNEIMITTEL-FORSCHUNG-DRUG RESEARCH, vol.57, no.4, pp.196-202, 2007 (Journal Indexed in SCI)
- XXIV. **Synthesis and characterization of Sr<sub>0.75</sub>Y<sub>0.25</sub>C<sub>1-x</sub>M<sub>x</sub>O<sub>2.625+delta</sub> (M = Ga, 0.125 ≤ x ≤ 0.500 and M = Fe, 0.125 ≤ x ≤ 0.875)**  
Lindberg F., Drozhzhin O. A. , Istomin S. Y. , Svensson G., KAYNAK F. B. , Svedlindh P., Warnicke P., Wannberg A.,

- Mellergard A., Antipov E. V.  
JOURNAL OF SOLID STATE CHEMISTRY, vol.179, no.5, pp.1434-1444, 2006 (Journal Indexed in SCI)
- XXV. **C - H center dot center dot center dot F, N / C - H center dot center dot center dot S and C - H center dot center dot center dot pi interactions in 5-fluoro-1H-indole-2,3-dione-3-thiosemicarbazones**  
ÖZBEY S., KAYNAK F. B. , Eriksson L., Karali N., Gursoy A.  
ACTA CRYSTALLOGRAPHICA A-FOUNDATION AND ADVANCES, vol.62, 2006 (Journal Indexed in SCI)
- XXVI. **3,4-Bis[(4-methoxybenzoyl)methyl-sulfanyl]thiophene**  
Ozbey S., KAYNAK F. B. , ERTAS E. S. , OZTURK T.  
ACTA CRYSTALLOGRAPHICA SECTION C-CRYSTAL STRUCTURE COMMUNICATIONS, vol.61, 2005 (Journal Indexed in SCI)
- XXVII. **New N'-alkylidene/cycloalkylidene derivatives of 5-methyl-3-phenyl-1H-indole-2-carbohydrazide: synthesis, crystal structure, and quantum mechanical calculations**  
KAYNAK F. B. , OZTURK D., Ozbey S., CAPAN G.  
JOURNAL OF MOLECULAR STRUCTURE, vol.740, pp.213-221, 2005 (Journal Indexed in SCI)
- XXVIII. **Synthesis of chiral crown ethers and complexation with chiral protonated amine compounds: X-ray crystal and nuclear magnetic resonance studies of perchlorate salt of chiral benzo-monoaza-15-crown-5 and chiral monoaza-15-crown-5**  
TOGRUL M., DEMIREL N., KAYNAK F. B. , Ozbey S., HOSGOREN H.  
JOURNAL OF INCLUSION PHENOMENA AND MACROCYCLIC CHEMISTRY, vol.50, pp.165-171, 2004 (Journal Indexed in SCI)
- XXIX. **Synthesis and crystal structure elucidation of 1-(4-fluorobenzyl)-2-(4-cyanophenyl)-1H-benzimidazole-5-carbonitrile**  
Ozbey S., KAYNAK F. B. , GOKER H., KUS C.  
JOURNAL OF CHEMICAL CRYSTALLOGRAPHY, vol.34, no.12, pp.851-858, 2004 (Journal Indexed in SCI)
- XXX. **Ethyl (3-ethyl-1-oxo-1,2,3,4-tetrahydrocarbazol-2-yl)acetate**  
KAYNAK F. B. , Ozbey S., ULUDAG N., PATIR S.  
ACTA CRYSTALLOGRAPHICA SECTION E-STRUCTURE REPORTS ONLINE, vol.60, 2004 (Journal Indexed in SCI)
- XXXI. **Saligenin derivative borocryptands: synthesis and structural analysis of new type lithium borocryptate**  
TOGRUL M., SUNKUR M., KAYNAK F. B. , HOSGOREN H., Ozbey S.  
JOURNAL OF CHEMICAL RESEARCH-S, no.10, pp.605, 2003 (Journal Indexed in SCI)
- XXXII. **2-Trichloroacetyl-1-(1-pyrrolidinyl)cyclopentene**  
KAYNAK F. B. , OZBEY S., Senoz H., TUNOGLU N.  
ACTA CRYSTALLOGRAPHICA SECTION E-STRUCTURE REPORTS ONLINE, vol.59, 2003 (Journal Indexed in SCI)
- XXXIII. **Crystal structure of {[mu-bis(salicylidene)-1,3-propanediaminato]-copper(II)}dibromozinc(II)**  
Ulku D., KAYNAK F. B. , Atakol O., Aksu M.  
ANALYTICAL SCIENCES, vol.19, no.5, pp.799-800, 2003 (Journal Indexed in SCI)
- XXXIV. **Synthesis of R-(-)-2-ethyl-N-benzyl (benzo-monoaza-15-crown-5) and the crystal structure of its sodium perchlorate complex**  
Ozbey S., KAYNAK F. B. , Togrul M., Demirel N., Hosgoren H.  
JOURNAL OF INCLUSION PHENOMENA AND MACROCYCLIC CHEMISTRY, vol.45, pp.123-128, 2003 (Journal Indexed in SCI)
- XXXV. **Crystal structure of an inclusion complex between chiral monoaza-15-crown-5 and S(-)-1-phenyl-ethyl ammonium perchlorate**  
Ozbey S., KAYNAK F. B. , TOGRUL M., DEMIREL N., HOSGOREN H.  
ZEITSCHRIFT FUR KRISTALLOGRAPHIE, vol.218, no.5, pp.381-384, 2003 (Journal Indexed in SCI)
- XXXVI. **Crystal structures of N-(trichloroacetyl)morpholine and 2,6-di(trichloroacetyl)cyclohexanone**  
OZBEY S., KAYNAK F. B. , Senoz H., TUNOGLU N.  
ZEITSCHRIFT FUR KRISTALLOGRAPHIE, vol.218, no.6, pp.440-444, 2003 (Journal Indexed in SCI)
- XXXVII. **2-(2,4-Dichlorophenyl)-5-fluoro-6-morpholin-4-yl-1H-benzimidazole monohydrate**  
Ozbey S., KAYNAK F. B. , KUS C., GOKER H.

- ACTA CRYSTALLOGRAPHICA SECTION E-STRUCTURE REPORTS ONLINE, vol.58, 2002 (Journal Indexed in SCI)
- XXXVIII. **{[mu-Bis(salicylidene)-1,3-propanediaminato]-bis(3,5-dimethylpyridine)-nickel(II)}dibromozinc(II)**  
Ulku D., KAYNAK F. B. , Atakol O.
- ACTA CRYSTALLOGRAPHICA SECTION E-STRUCTURE REPORTS ONLINE, vol.58, 2002 (Journal Indexed in SCI)
- XXXIX. **5,6-Diphenylthieno[2,3-d][1,3]-dithiole-2-thione**  
KAYNAK F. B. , Ozbey S., OZTURK T., ERTAS E. S.
- ACTA CRYSTALLOGRAPHICA SECTION C-CRYSTAL STRUCTURE COMMUNICATIONS, vol.57, pp.1125-1126, 2001  
(Journal Indexed in SCI)
- XL. **5,6-diphenyl[1,3]dithiolo[4,5-b]dithiine-2-thione**  
KAYNAK F. B. , Ozbey S., OZTURK T., ERTAS E. S.
- ACTA CRYSTALLOGRAPHICA SECTION C-CRYSTAL STRUCTURE COMMUNICATIONS, vol.57, pp.926-928, 2001  
(Journal Indexed in SCI)
- XLI. **5-Benzyl-5-phenyl[1,3]dithiolo[4,5-d]-[1,3]dithiole-2-thione**  
KAYNAK F. B. , Ozbey S., OZTURK T., ERTAS E. S.
- ACTA CRYSTALLOGRAPHICA SECTION C-CRYSTAL STRUCTURE COMMUNICATIONS, vol.57, pp.319-320, 2001  
(Journal Indexed in SCI)

## Refereed Congress / Symposium Publications in Proceedings

- Crystal structure determination of two novel 1,2,4-triazolo[3,4-b]1,3,4-thiaziazine and thiadiazole derivatives by XRPD method**  
KAYNAK F. B. , GÜNDOĞDU G., MÜLLER M., ÖZBEY S.  
30 th European Crystallographic Meeting, Basel, Switzerland, 28 August - 01 September 2016, vol.72, pp.359

## Supported Projects

- KAYNAK F. B. , Project Supported by Higher Education Institutions, "30. Avrupa Kristalografisi Kongresi" ne Katılım, 2016 - 2016
- KAYNAK F. B. , Kahveci E., Gündoğdu G., Project Supported by Higher Education Institutions, Galyum Katkılı Çinko Oksit (ZnO) İnce Filmlerin Yapısal Karakterizasyonu, 2016 - 2016
- KAYNAK F. B. , Project Supported by Higher Education Institutions, Analjezik ve Antiinflamatuvar Etki Gösteren Bazı Bileşiklerde Moleküler Modelleme, 2015 - 2016
- KAYNAK F. B. , Project Supported by Higher Education Institutions, "29. AVRUPA KRİSTALOGRAFİ TOPLANTISI" NA KATILIM, 2015 - 2015

## Citations

Total Citations (WOS):425

h-index (WOS):10