

Assoc. Prof. Ayberk YILMAZ

Personal Information

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Education Information

Doctorate, İstanbul Üniversitesi, Fen Bilimleri Ens., Fizik, Turkey 2003 - 2007

Post Graduate, İstanbul Üniversitesi, Fen Bilimleri Ens., Fizik, Turkey 2000 - 2003

Under Graduate, İstanbul Üniversitesi, Faculty of Science, Fizik, Turkey 1995 - 1999

Foreign Languages

English, B2 Upper Intermediate

Dissertations

Doctorate, Bazı Biyolojik Aktif Molekül Ligandlarının ve Bu Ligandlarla Oluşan Metal Komplekslerinin Titreşimsel Spektrumlarının Deneysel ve Kuantum Kimyasal Yöntemlerle İncelenmesi, İstanbul University, Fen Bilimleri Ens., Fizik, 2007

Post Graduate, Kiyotorfin Dipeptininin Sıcaklığa Bağlı FT-IR Spektroskopisi ile İncelenmesi, İstanbul University, Fen Bilimleri Ens., Fizik, 2003

Research Areas

Physics, Atomic and Molecular Physics, Atomic and Molecular Interactions, Natural Sciences

Academic Titles / Tasks

Assistant Professor, İstanbul University, Faculty of Science, Department of Physics, 2018 - Continues

Assistant Professor, İstanbul University, Faculty of Science, Department of Physics, 2009 - 2018

Lecturer PhD, İstanbul Üniversitesi, Faculty of Science, Department of Physics, 2007 - 2009

Research Assistant, İstanbul Üniversitesi, Faculty of Science, Department of Physics, 2001 - 2007

Professional Experience

Deputy Head of Department, İstanbul Üniversitesi, 2011 - 2012

Courses

BİLGİSAYAR PROGRAMLAMA II Matematik İ.Ö, Under Graduate, 2018 - 2019

BİLGİSAYAR PROGRAMLAMA (PYTHON), Under Graduate, 2018 - 2019

BİLGİSAYAR PROGRAMLAMA I Matematik Örgün Tek , Under Graduate, 2018 - 2019

FİZİKTE MODELLEME VE SİMÜLASYON, Under Graduate, 2018 - 2019

BİLGİSAYAR PROGRAMLAMA I Fizik İ.Ö, Under Graduate, 2017 - 2018

BİLGİSAYAR PROGRAMLAMA II Matematik Örgün, Under Graduate, 2018 - 2019
FİZİKTE SAYISAL YÖNTEMLER VE UYGULAMALARI II, Post Graduate, 2017 - 2018
BİLGİSAYARDA MATEMATİK UYGULAMALARI Matematik İ.Ö, Under Graduate, 2017 - 2018
BİLGİSAYAR PROGRAMLAMA I Matematik İ.Ö, Under Graduate, 2017 - 2018
BİLGİSAYAR PROGRAMLAMA I Matematik Örgün , Under Graduate, 2017 - 2018

Advising Theses

YILMAZ A., Bakır-protionamid kompleksinin titreşim spektrumunun deneysel FTIR incelenmesi, Post Graduate, S.MOHAMED(Student), 2017
YILMAZ A., Bose-Einstein yoğunlaşmasında düzgün doğrusal olmayan davranışların incelenmesi, Doctorate, E.TOSYALI(Student), 2015
YILMAZ A., PROTİYONAMİD MOLEKÜLÜNÜN TİTREŞİM SPEKTRUMLARININ VE YAPILARININ İNCELENMESİ, Post Graduate, M.Emin(Student), 2011

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- **Solvent effects on UV-Vis and FT-IR spectra of indapamide combined with DFT calculations**
Yalcinkaya O., Yılmaz A., Ceylan B. I.
CHEMICAL PAPERS, vol.74, pp.1103-1111, 2020 (Journal Indexed in SCI)
- **A square-pyramidal iron(III) complex obtained from 2-hydroxy-benzophenone-S-allyl-thiosemicarbazone: synthesis, characterization, electrochemistry, quantum chemical studies and antioxidant capability**
Ceylan B. I., YILMAZ A., Bolukbasi O., Acar E. T. , Ozyurek M., Kurt Y., Ulkuseven B.
JOURNAL OF COORDINATION CHEMISTRY, vol.73, pp.120-136, 2020 (Journal Indexed in SCI)
- **Raman Spectroscopic and Chemometric Investigation of Lipid-Protein Ratio Contents of Soybean Mutants**
ÖĞRÜÇ İLDİZ G., ÇELİK Ö., ATAK Ç., Yılmaz A., Kabuk H. N. , Kaygisiz E., AYAN A., Meric S., Fausto R.
APPLIED SPECTROSCOPY, vol.74, pp.34-41, 2020 (Journal Indexed in SCI)
- **FCC-hh: The Hadron Collider: Future Circular Collider Conceptual Design Report Volume 3**
Abada A., Abbrescia M., AbdusSalam S. S. , Abdyukhanov I., Abelleira Fernandez J., Abramov A., Aburaia M., Acar A. O. , Adzic P. R. , Agrawal P., et al.
EUROPEAN PHYSICAL JOURNAL-SPECIAL TOPICS, vol.228, pp.755-1107, 2019 (Journal Indexed in SCI)
- **HE-LHC: The High-Energy Large Hadron Collider Future Circular Collider Conceptual Design Report Volume 4**
Abada A., Abbrescia M., AbdusSalam S. S. , Abdyukhanov I., Abelleira Fernandez J., Abramov A., Aburaia M., Acar A. O. , Adzic P. R. , Agrawal P., et al.
EUROPEAN PHYSICAL JOURNAL-SPECIAL TOPICS, vol.228, pp.1109-1382, 2019 (Journal Indexed in SCI)
- **FCC Physics Opportunities: Future Circular Collider Conceptual Design Report Volume 1**
Abada A., Abbrescia M., AbdusSalam S. S. , Abdyukhanov I., Fernandez J. A. , Abramov A., Aburaia M., Acar A. O. , Adzic P. R. , Agrawal P., et al.
EUROPEAN PHYSICAL JOURNAL C, vol.79, 2019 (Journal Indexed in SCI)
- **FCC-ee: The Lepton Collider: Future Circular Collider Conceptual Design Report Volume 2**
Abada A., Abbrescia M., AbdusSalam S., Abdyukhanov I., Abelleira Fernandez J., Abramov A., Aburaia M., Acar A., Adzic P., Agrawal P., et al.
EUROPEAN PHYSICAL JOURNAL-SPECIAL TOPICS, vol.228, pp.261-623, 2019 (Journal Indexed in SCI)
- **The Saricicek howardite fall in Turkey: Source crater of HED meteorites on Vesta and impact risk of Vestoids**
Unsalan O., Jenniskens P., Yin Q., Kaygisiz E., Albers J., Clark D. L. , Granvik M., DEMİRKOL İ., ERDOĞAN İ. Y. , BENGÜ A. Ş. , et al.
METEORITICS & PLANETARY SCIENCE, vol.54, pp.953-1008, 2019 (Journal Indexed in SCI)
- **Regular and chaotic solutions in BEC for tilted bichromatical optical lattice**
Tosyali E., Aydogmus F., Yılmaz A.

INTERNATIONAL JOURNAL OF MODERN PHYSICS B, vol.32, 2018 (Journal Indexed in SCI)

- **Experimental and theoretical studies on cis-dioxomolybdenum(VI) complexes of ONN-donor thiosemicarbazon**
Ilhan Ceylan B., Yilmaz A., Bolukbasi Yalcinkaya O., Ulkuseven B.
TURKISH JOURNAL OF CHEMISTRY, vol.42, pp.1285-1329, 2018 (Journal Indexed in SCI)
- **Investigation of the Effects of Seizures Induced with Penthylentetrazole on Biomolecular Structure in Peripheral Tissues with Fourier Transform Infrared Spectroscopy Method and Comparison with Oxidative Stress Markers**
Uzum G., Kuruca S., Kaptan Z., Kapucu A., Dar K., Yilmaz A., Yalcinkaya O., Kartal S., Kaleler I.
ACTA PHYSIOLOGICA, vol.221, pp.73-74, 2017 (Journal Indexed in SCI)
- **Molecular structure and vibrational spectroscopic studies of prothionamide by density functional theory**
Yilmaz A., Bolukbasi O.
SPECTROCHIMICA ACTA PART A-MOLECULAR AND BIOMOLECULAR SPECTROSCOPY, vol.152, pp.262-271, 2016 (Journal Indexed in SCI)
- **Micro-Raman, Mid-IR, Far-IR and DFT studies on 2-[4-(4-Fluorobenzamido)phenyl]benzothiazole**
Unsalan O., Sert Y., Ari H., Simao A., Yilmaz A. İ., Boyukata M., Bolukbasi O., Bolelli K., Yalcin I.
SPECTROCHIMICA ACTA PART A-MOLECULAR AND BIOMOLECULAR SPECTROSCOPY, vol.125, pp.414-421, 2014 (Journal Indexed in SCI)
- **Micro-Raman, Mid-IR, Far-IR and DFT studies on 2-[4-(4-Fluorobenzamido) phenyl] benzothiazole**
ÜNSALAN O., Sert Y., Ari H., Simao A., YILMAZ A., Büyükata M., BÖLÜKBAŞI YALÇINKAYA O., Bolelli K., Yalçın İ.
SPECTROCHIMICA ACTA PART A-MOLECULAR AND BIOMOLECULAR SPECTROSCOPY, vol.125, pp.414-421, 2014 (Journal Indexed in SCI Expanded)
- **X-ray structure analysis and vibrational spectra of Furosemide**
Bolukbasi O., Yilmaz A.
VIBRATIONAL SPECTROSCOPY, vol.62, pp.42-49, 2012 (Journal Indexed in SCI)
- **Micro-Raman, FTIR, SEM-EDX and structural analysis of the Canakkale meteorite**
Unsalan O., Yilmaz A., Bolukbasi O., Öztürk B., Esenoglu H. H., Ildiz G. O., Örnek C.
SPECTROCHIMICA ACTA PART A-MOLECULAR AND BIOMOLECULAR SPECTROSCOPY, vol.92, pp.250-255, 2012 (Journal Indexed in SCI)
- **FT-Raman, FT-IR and NMR spectra, vibrational assignments and density functional studies of 1,3-bis(benzimidazol-2-yl)-2-thiopropene ligand and its Zn(II) halide complexes**
Aghatabay N. M., Tulu M., Somer M., Hacı D., Yilmaz A.
STRUCTURAL CHEMISTRY, vol.19, pp.21-32, 2008 (Journal Indexed in SCI)
- **An experimental and theoretical vibrational spectra of isoniazide**
YILMAZ A., Bolukbasi O., Bakiler M.
Journal of Molecular Structure, vol.872, pp.182-189, 2008 (Journal Indexed in SCI)
- **An experimental and theoretical vibrational spectra of isoniyazide”, Journal of Molecular Structure**
YILMAZ A., Bölükbaşı O., Bakiler M.
JOURNAL OF MOLECULAR STRUCTURE, vol.2-3, pp.182-189, 2008 (Journal Indexed in SCI Expanded)
- **FT-Raman, FT-IR and NMR spectra, vibrational assignments and density functional studies of 1,3-bis(benzimidazol-2-yl)-2-thiopropene ligand and its Zn(II) halide complexes’**
Aghatabay N. M., TALU M., Somer M., Hacı D., YILMAZ A.
STRUCTURAL CHEMISTRY, vol.19, pp.21-32, 2007 (Journal Indexed in SCI Expanded)
- **An experimental and theoretical study of vibrational spectra of picolinamide, nicotinamide, and isonicotinamide**
Bakiler M., Bolukbasi O., Yilmaz A.
JOURNAL OF MOLECULAR STRUCTURE, vol.826, pp.6-16, 2007 (Journal Indexed in SCI)
- **Theoretical and experimental vibrational spectra of kyotorphin dipeptide**
Yilmaz A., AKYUZ S.
JOURNAL OF MOLECULAR STRUCTURE, vol.744, pp.951-960, 2005 (Journal Indexed in SCI)
- **Vibrational analysis of isonicotinamide**
Akalin E., Yilmaz A., Akyüz S.
JOURNAL OF MOLECULAR STRUCTURE, vol.744, pp.881-886, 2005 (Journal Indexed in SCI)

Articles Published in Other Journals

- **Synthesis, Spectroscopic and Quantum Chemical Studies of a Novel Cis-dioxomolybdenum (vi) Thiosemicarbazonate Complex**
İlhan Ceylan B., YILMAZ A., BÖLÜKBAŞI YALÇINKAYA O., ÜLKÜSEVEN B.
International Journal of Chemical Engineering and Applications, vol.7, pp.195-198, 2016 (Refereed Journals of Other Institutions)
- **Synthesis, Spectroscopic and Quantum Chemical Studies of a Novel Cis-dioxomolybdenum(VI) Thiosemicarbazonate Complex**
İLHAN CEYLAN B., YILMAZ A., BÖLÜKBAŞI YALÇINKAYA O., Ülküseven B.
International Journal of Chemical Engineering and Applications, no.3, pp.195-198, 2016 (Refereed Journals of Other Institutions)
- **Synthesis, Spectroscopic and Quantum Chemical Studies of a Novel Cis-dioxomolybdenum(VI) Thiosemicarbazonato Complex**
İLHAN CEYLAN B., YILMAZ A., BÖLÜKBAŞI YALÇINKAYA O., ÜLKÜSEVEN B.
International Journal Of Chemical Engineering and Applications, vol.7, pp.195-198, 2016 (Refereed Journals of Other Institutions)

Book & Book Chapters

- **in: New Researches New Ideas on Social Science**
EMRE G., Yaşayan G., ÜNSALAN O., YILMAZ A.
The Importance Of Surface-Cleaning In The Conservation And Restoration Of Oil Paintings, Saritaş E., Editor,
Trafford Publishing , Texas, pp.303-346, 2017

Refereed Congress / Symposium Publications in Proceedings

- **Global Optimization and Vibrational Frequencies of Lennard-Jones Cluster Containing 7 Atoms**
YILMAZ A., BÖLÜKBAŞI YALÇINKAYA O.
Molecular Spectroscopy and Biological Applications International Workshop, İstanbul, Turkey, 17 - 18 June 2019,
pp.6
- **Solvent Effect On Infrared Spectra Of Anti-Hypertension Drug Molecules**
BÖLÜKBAŞI YALÇINKAYA O., YILMAZ A.
Molecular Spectroscopy and Biological Applications International Workshop, İstanbul, Turkey, 17 - 18 June 2019,
pp.5
- **Synthesis, spectroscopic characterization and DFT studies of Cu(II)-Furosemide Complex'**
İLHAN CEYLAN B., BÖLÜKBAŞI YALÇINKAYA O., YILMAZ A., ÜLKÜSEVEN B.
8th International Advanced Technologies Symposium (IATS'17), Elazığ, Turkey, 19 - 22 October 2017, pp.1177
- **Pentilentetrazol ile İndüklenen Nöbetlerin Periferik Dokularda Biyomoleküler Yapı Üzerine Etkilerinin Fourier Transform İnfrared Spektroskopi Yöntemi ile Araştırılması ve Oksidatif Stres Markırları ile Karşılaştırılması.**
ÜZÜM G., Erdem Kuruca S., Kaptan Z., KAPUCU A., AKGÜN DAR K., YILMAZ A., BÖLÜKBAŞI YALÇINKAYA O., KARTAL S., Kaleler İ., KURUCA D. S.
43. Ulusal Fizyoloji Kongresi, Denizli, Turkey, 7 - 10 September 2017, pp.82
- **Synthesis, Experimental and Theoretical Characterization of Metal Complexes of Furosemide with Pd (II) and Fe (III) ions**
İLHAN CEYLAN B., BÖLÜKBAŞI YALÇINKAYA O., YILMAZ A., Ülküseven B.
IVEK 3rd International Convention of Pharmaceuticals and Pharmacies, Kopenhag, Denmark, 2 - 05 July 2017,
pp.56
- **Resonant Production of Scalar Leptons via RPV Couplings at the FCC**
KARTAL S., BÖLÜKBAŞI YALÇINKAYA O., YILMAZ A., Özdemir K., Sultansoy S., Şahin M.
FCC Week 2017, Berlin Germany, Berlin, Germany, 29 May - 02 June 2017, pp.268

- **Experimental and DFT study on Cu(II)-Prothionamide Complex**
İLHAN CEYLAN B., YILMAZ A., BÖLÜKBAŞI YALÇINKAYA O., ÜLKÜSEVEN B.
MEK 3rd International Convention of Pharmaceuticals and Pharmacies, İstanbul, Turkey, 26 - 29 April 2017, pp.385
- **SEARCH ON GAUGE BOSON WITH HIGGS ANOMALOUS COUPLINGS AT EP-COLLIDERS**
BÖLÜKBAŞI YALÇINKAYA O., ALTINLI M., TÜRK ÇAKIR İ., YILMAZ A., ŞENOL A. K. , KARTAL S.
TFD32 Uluslararası Fizik Kongresi, Muğla, Turkey, 6 - 09 September 2016, pp.15-16
- **FT-IR Spectroscopy and Multivariate Analysis as an Auxiliary Tool for Diagnosis of Mental Disorders: Bipolar and Schizophrenia Cases**
ÖĞRÜÇ İLDİZ G., ÜNSALAN O., ARAUJO-ANDRADE C., ARSLAN M., KARATEPE H. T. , YILMAZ A., BÖLÜKBAŞI O., HERKEN H.
II. International Turkish Congress on Molecular Spectroscopy, Antalya, Turkey, 13 - 18 September 2015, pp.216
- **'A Comparative Study on Vibrational Spectra of Free Indapamide and its DMSO Solution'**
BÖLÜKBAŞI YALÇINKAYA O., YILMAZ A., İLHAN CEYLAN B.
II. International Turkish Congress on Molecular Spectroscopy (TURCMOS 2015), Antalya, Turkey, 13 - 18 September 2015, pp.118
- **Türkiye Meteor Takip Sistemleri Donanım, Yazılım ve Özellikleri**
Kaygısız E., ÜNSALAN O., Terzioğlu Z., Temel T., Solmaz A., Topoyan D., Özel M. E. , Derman İ., Kocahan Ö., ESENOĞLU H. H. , et al.
UAK2015-19.Ulusal Astronomi Kongresi ve 8.Ulusal Astronomi Öğrenci Kongresi, Ankara, Turkey, 2 - 06 February 2015, pp.1
- **SYNTHETIC, SPECTROSCOPIC AND QUANTUM CHEMICAL STUDIES OF A NOVEL CIS-DIOXOMOLYBDENUM(VI) THIOSEMICARBAZONATE COMPLEX**
İLHAN CEYLAN B., YILMAZ A., BÖLÜKBAŞI YALÇINKAYA O., ÜLKÜSEVEN B.
6th International Conference on Chemical, Biological and Environmental Engineering' (ICBEE 2014), Paris, France, 15 - 16 September 2014, pp.1-5
- **Turkish Meteor Surveillance Systems and Network: Impact Craters and Meteorites Database**
ÜNSALAN O., BÖLÜKBAŞI YALÇINKAYA O., YILMAZ A.
Asteroids, Comets, Meteors, Helsinki, Switzerland, 30 - 04 June 2014, pp.10-11
- **Pollutant identification on the walls of "Valence Aqueduct" (Bozdoğan Kemer, İstanbul) by portable handheld Raman, SEM-EDX, Far-infrared and Mid-infrared techniques.**
ÜNSALAN O., BÖLÜKBAŞI YALÇINKAYA O., YILMAZ A., BÖLÜKBAŞI YALÇINKAYA O., EMRE G.
International Turkish Congress on Molecular Spectroscopy, İstanbul, Turkey, 11 - 15 June 2013, pp.4
- **Far-infrared, Mid-infrared, Raman and SEM-EDX investigations on pigments from palette of old paintings by Feyhaman Duran and comparison with organic pigments**
ÜNSALAN O., EMRE G., YILMAZ A., Yaşayan G.
International Turkish Congress on Molecular Spectroscopy, İstanbul, Turkey, 11 - 15 June 2013, pp.3
- **Structural identification of the Çanakkale meteorite by vibrational spectroscopy**
ÜNSALAN O., YILMAZ A., BÖLÜKBAŞI YALÇINKAYA O., ÖZTÜRK B., ESENOĞLU H. H. , ÖRNEK C. Y.
POLCMOS-2011, Poland, pp.1
- **Micro-Raman, FTIR, SEM-EDX and structural analysis of Çanakkale Meteorite**
ÜNSALAN O., YILMAZ A., BÖLÜKBAŞI YALÇINKAYA O., ÖZTÜRK B., ESENOĞLU H. H. , ÖRNEK C. Y.
Turkish Physical Society 28th International Physical Congress, Muğla, Turkey, pp.164
- **The Intra and Intermolecular Hydrogen Bonding Effects Of Isoniazide**
BÖLÜKBAŞI YALÇINKAYA O., YILMAZ A., BAKİLER M.
2nd Workshop on Computer Aided Drug Design& Development- Molecular modeling, Ankara, Turkey, 26 - 29 June 2008, pp.80
- **Pikolinamid Molekülünün Titreşim Spektrumunun Yoğunluk Fonksiyon Teorisi ile İncelenmesi**
BÖLÜKBAŞI YALÇINKAYA O., YILMAZ A., BAKİLER M.
Atom Molekül ve Çekirdek Sistemlerinin Yapıları ve Spektrumları Çalıştayı, Çanakkale, Turkey, 8 - 10 July 2005, pp.46
- **Tetraazidoaurat(III),[AU(N3)4]-,Kompleks Anyonlarının Deneysel ve Teorik Yöntemlerle Titreşimsel Spektrumlarının İncelenmesi**
YILMAZ A., BÖLÜKBAŞI YALÇINKAYA O., Somer M.

Atom Molekül ve Çekirdek Sistemlerinin Yapıları ve Spektrumları Çalıştayı, Çanakkale, Turkey, 8 - 10 July 2005, pp.38

- **Vibrational Analysis of Hydralazine**

ÖZEL A., Can A., YALÇINKAYA O., YILMAZ A., AKYÜZ S.

XXVII European Congress on Molecular Spectroscopy, Poland, 1 - 04 September 2004, pp.1

- **Vibrational Analysis of Isonicotinamide**

AKALIN E., YILMAZ A., Akyüz S.

XXVIIth European Congress on Molecular Spectroscopy, Poland, 1 - 04 September 2004, pp.360

Other Publications

- **Turkish meteor surveillance systems and network: Impact craters and meteorites database, Poster Presentation — ACM (Asteroids, Comets and Meteors), Marina Congress Center, Helsinki, June 30th – July 4th 2014**

ÜNSALAN O., Özel M. E. , Derman İ., Terzioğlu Z., Kaygısız E., Temel T., Topoyan D., Solmaz A., Kocahan O. Y. , ESENOĞLU H. H. , et al.

Other, pp.559, 2014

Supported Projects

KARTAL S., YILMAZ A., SAHİN M., ÖZDEMİR K., SULTANSOY S., BÖLÜKBAŞI YALÇINKAYA O., Project Supported by Higher Education Institutions, Resonant Production of Scalar leptons via RPV Couplings at the FCC, 2017 - 2018

BÖLÜKBAŞI YALÇINKAYA O., YILMAZ A., Project Supported by Higher Education Institutions, SARIÇİÇEK (BİNGÖL) METEORİTLERİNİN, JEOLJİ MÜZESİ KOLEKSİYONU'NA KAZANDIRILMASI, 2015 - 2016

BÖLÜKBAŞI YALÇINKAYA O., YILMAZ A., İLHAN CEYLAN B., Project Supported by Higher Education Institutions, İndapamide Molekülünün Oksomolbden (IV) ile oluşturduğu kompleksin Titreşim Spektrumu ile İncelenmesi, 2015 - 2016

KARTAL S., BÖLÜKBAŞI YALÇINKAYA O., YILMAZ A., Project Supported by Higher Education Institutions, Yeraltı Araştırma Laboratuvarında Karanlık Madde Araştırması, 2015 - 2016

Citations

Total Citations (WOS):289

h-index (WOS):8

Awards

YILMAZ A., Araştırma, Max Planck Institute for Chemical Physics of Solids, July 2006

DAYLAN ESMER G., YILMAZ A., BAŞARILI ARAŞTIRMACI BELGESİ, İSTANBUL ÜNİVERSİTESİ ARAŞTIRMA FONU, September 2005