

## Prof. Sedat Gümüř

### Personal Information

**Email:** sedatg@omu.edu.tr

**Web:** <https://avesis.omu.edu.tr/sedatg>

### International Researcher IDs

ScholarID: cpEAQOcAAAAJ

ORCID: 0000-0001-7750-9452

Publons / Web Of Science ResearcherID: H-4645-2013

ScopusID: 6602962435

Yoksis Researcher ID: 34487

### Education Information

Doctorate, Ondokuz Mayıs University, Fen Bilimleri Enstitüsü, Fizik (Dr), Turkey 1994 - 1999

Postgraduate, Ondokuz Mayıs University, Fen Bilimleri Enstitüsü, Fizik (YI) (Tezli), Turkey 1991 - 1994

Undergraduate, Ondokuz Mayıs University, Fen-Edebiyat Fakültesi, Fizik Bölümü, Turkey 1983 - 1987

### Foreign Languages

English, B2 Upper Intermediate

### Dissertations

Doctorate, Atomların bazı özelliklerinin Slater tipi atom yörüngesi kullanılarak Hartree-Fock-Roothaan yöntemi ile hesaplanması, Ondokuz Mayıs University, Fen Bilimleri Enstitüsü, Fizik (Dr), 1999

Postgraduate, Rombus şekilli dislokasyon çevriminin anizotropik esneklik alanının hesabı, Ondokuz Mayıs University, Fen Bilimleri Enstitüsü, Fizik (YI) (Tezli), 1994

### Academic Titles / Tasks

Professor, Ondokuz Mayıs University, Fen-Edebiyat Fakültesi, Fizik Bölümü, 2014 - Continues

Associate Professor, Ondokuz Mayıs University, Fen-Edebiyat Fakültesi, Fizik Bölümü, 2009 - 2014

Associate Professor, Amasya University, Eğitim Fakültesi, Matematik Ve Fen Bilimleri Eğitimi Bölümü, 2008 - 2008

Assistant Professor, Amasya University, Eğitim Fakültesi, Matematik Ve Fen Bilimleri Eğitimi Bölümü, 2006 - 2007

Assistant Professor, Ondokuz Mayıs University, Amasya Eğitim Fakültesi, Fen Bilgisi Öğretmenliği Pr., 2000 - 2005

### Academic and Administrative Experience

Ondokuz Mayıs University, 2010 - 2011

### Courses

## Postgraduate

Kuantum Mekaniği I, Postgraduate, 2013 - 2014

FİZ837 UZMANLIK ALAN DERSİ I, Postgraduate, 2013 - 2014, 2011 - 2012, 2010 - 2011, 2009 - 2010

FFİ639 Moleküler Titreşim Spektros. I , Postgraduate, 2012 - 2013, 2009 - 2010

FİZ838 Uzmanlık Alan Dersi II , Postgraduate, 2011 - 2012

FFİ640 Moleküler Titreşim Spektros. II, Postgraduate, 2010 - 2011

FFİ602 Fizikte Matematiksel Yö. II , Postgraduate, 2009 - 2010

FFİ601 Fizikte Matematiksel Yö. I , Postgraduate, 2008 - 2009

## Undergraduate

FİZ 403 İSTATİSTİK FİZİK, Undergraduate, 2013 - 2014, 2012 - 2013, 2011 - 2012, 2010 - 2011

FİZ301 Kuantum Mekaniği I , Undergraduate, 2012 - 2013

Kuantum Mekaniği II , Undergraduate, 2012 - 2013

FİZ404 Klasik Mekanik , Undergraduate, 2011 - 2012, 2010 - 2011, 2009 - 2010

FİZ451 Fizikçiler İçin Temel Matematik, Undergraduate, 2010 - 2011

FİZ105 Genel Fizik I lab, Undergraduate, 2010 - 2011

FİZ103 Fizik I , Undergraduate, 2009 - 2010

FİZ 182 Genel Fizik II , Undergraduate, 2008 - 2009

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

- I. **Experimental and theoretical comparison of the vibrational and NMR spectra of novel 6-6'-(1E-1'E)-(Propane-1,3Diylbis (Azanylydene)) Bis (Phenylmethylidene)) Bis (3-Octyloxy) Phenol), NBO and molecular docking studies**  
Gümüş S., Guner H., Meral S., Agar A.  
JOURNAL OF MOLECULAR STRUCTURE, vol.1299, 2024 (SCI-Expanded)
- II. **Investigation of tautomeric behavior of 3-amino-4-[4-(dimethylamino)phenyl]-4,5-dihydro-1,2,5-thiadiazole 1,1-dioxide using Fourier Transform infrared and nuclear magnetic resonance spectroscopic methods: A density functional theory supported study**  
ERTÜRK A. G., Gümüş S., DİKMEN G., ALVER Ö.  
CHEMICAL PHYSICS LETTERS, vol.661, pp.151-156, 2016 (SCI-Expanded)
- III. **Synthesis, molecular structure, FT-IR, FT-Raman and XRD spectroscopic investigations of (E)-1-(5-((4-bromophenyl) diazenyl)-2-hydroxyphenyl)ethanone: A comparative DFT study**  
Ağar E., ALVER Ö., Köroğlu A., Gümüş S., Kazak C.  
JOURNAL OF MOLECULAR STRUCTURE, vol.1098, pp.84-91, 2015 (SCI-Expanded)
- IV. **Syntheses, studies and crystal structures of coordination polymers and dinuclear complexes of mercury(II) halides and thiocyanate with a symmetrical Schiff base ligand**  
Khandar A. A., YILMAZ V. T., Costantino F., Gümüş S., Hosseini-Yazdi S. A., Mahmoudi G.  
INORGANICA CHIMICA ACTA, vol.394, pp.36-44, 2013 (SCI-Expanded)
- V. **Vibrational analyses of 1,3-dibenzoyl-4,5-dihydro-1H-imidazole-2-thione and 1,3-dibenzoyl tetrahydropyrimidine-2(1H)-thione by normal coordinate treatment**  
Gümüş S., Sundius T., YILMAZ V. T.  
SPECTROCHIMICA ACTA PART A-MOLECULAR AND BIOMOLECULAR SPECTROSCOPY, vol.98, pp.384-395, 2012 (SCI-Expanded)
- VI. **Synthesis, experimental and theoretical characterization of palladium(II) and platinum(II) saccharinate complexes with 2-(2-pyridyl)benzimidazole**  
Guney E., Kaya Y., YILMAZ V. T., Gümüş S.  
SPECTROCHIMICA ACTA PART A-MOLECULAR AND BIOMOLECULAR SPECTROSCOPY, vol.79, no.5, pp.1171-1178, 2011 (SCI-Expanded)
- VII. **A Complete Product Operator Theory for IS (I=1, S=1) Spin System and Application to 3D HMQC-COSY NMR Experiment**

Saka I, Gümüş S, Gençten A.

ZEITSCHRIFT FÜR NATURFORSCHUNG SECTION A-A JOURNAL OF PHYSICAL SCIENCES, vol.64, no.5-6, pp.377-386, 2009 (SCI-Expanded)

- VIII. **A one-dimensional silver(I) coordination polymer with saccharin and pyrazine: synthesis, crystal structure, thermal analysis, FTIR spectra, and DFT studies**  
Hamamci S, YILMAZ V. T., Gumus S, Bueyuekguengoer O.  
STRUCTURAL CHEMISTRY, vol.19, no.1, pp.123-129, 2008 (SCI-Expanded)
- IX. **A luminescent silver-saccharinato complex with S,S-diphenylsulfimide: Synthesis, spectroscopic, thermal, structural and DFT computational studies**  
Gumus S., Hamamci S., YILMAZ V. T., Kazak C.  
JOURNAL OF MOLECULAR STRUCTURE, vol.828, no.1-3, pp.181-187, 2007 (SCI-Expanded)
- X. **Syntheses, IR spectra, thermal analyses, crystal structures, luminescence properties and DFT calculations of two silver-saccharinato complexes with 2-(dimethylaminomethyl)-3-hydroxypyridine and N-(2-aminoethyl)pyrrolidine**  
YILMAZ V. T., Hamamci S., Gumus S., Buyukgungor O.  
JOURNAL OF MOLECULAR STRUCTURE, vol.794, no.1-3, pp.142-147, 2006 (SCI-Expanded)
- XI. **Photoluminescence of two silver(I)-saccharinate complexes with pyrazine and pyridazine: Experiment and DFT calculations**  
YILMAZ V. T., Hamamci S., Gumus S.  
CHEMICAL PHYSICS LETTERS, vol.425, no.4-6, pp.361-366, 2006 (SCI-Expanded)
- XII. **A non-metallic ionic saccharinate. Synthesis, structure and DFT calculations of piperazinium disaccharinate**  
Gumus S., Guney S., YILMAZ V. T., Kazak C.  
ZEITSCHRIFT FÜR ANORGANISCHE UND ALLGEMEINE CHEMIE, vol.632, no.8-9, pp.1544-1548, 2006 (SCI-Expanded)
- XIII. **On the computation of two-center Coulomb integrals over Slater type orbitals using the Poisson equation**  
Gumus S.  
ZEITSCHRIFT FÜR NATURFORSCHUNG SECTION A-A JOURNAL OF PHYSICAL SCIENCES, vol.60, no.7, pp.477-483, 2005 (SCI-Expanded)
- XIV. **Symbolic calculation of two-center overlap integrals over slater-type orbitals**  
Gumus S., Ozdogan T.  
JOURNAL OF THE CHINESE CHEMICAL SOCIETY, vol.51, no.2, pp.243-252, 2004 (SCI-Expanded)
- XV. **On the evaluation of two-center overlap integrals over integer and noninteger n-Slater-type orbitals**  
Özdoğan T., Orbay M., Gümüş S.  
Communications in Theoretical Physics, vol.37, no.6, pp.711-714, 2002 (SCI-Expanded)

## Articles Published in Other Journals

- I. **2D MAXY-JRES NMR spectroscopy of CH<sub>n</sub>CH<sub>m</sub> (CA nCX<sub>m</sub>) groups: Product operator theory and simulation**  
Şaka I, Gümüş S, Gençten A.  
Turkish Journal of Physics, vol.31, no.6, pp.347-354, 2007 (Scopus)
- II. **2D MAXY-JRES NMR Spectroscopy of CH<sub>n</sub>CH<sub>m</sub> (CA(n)CX(m)) Groups: Product Operator Theory and Simulation**  
Saka I, Gumus S., Gençten A.  
TURKISH JOURNAL OF PHYSICS, vol.31, no.6, pp.347-354, 2007 (ESCI)
- III. **PENDANT 13C NMR spectroscopy applied to CH<sub>n</sub> groups**  
Gençten A., Şaka I., Gümüş S.  
Turkish Journal of Physics, vol.30, no.3, pp.149-155, 2006 (Scopus)

**IV. A THEORETICAL INVESTIGATION OF PENDANT <sup>13</sup>C NMR SPECTROSCOPY FOR CD<sub>n</sub> GROUPS**

GENÇTEN A., ŞAKA İ., GÜMÜŞ S.

SDÜ FEN EDEBİYAT FAKÜLTESİ FEN DERGİSİ (E-DERGİ), vol.1, no.1-2, pp.42-49, 2006 (Peer-Reviewed Journal)

**V. PENDANT C-13 NMR Spectroscopy Applied to CH<sub>n</sub> Groups**

Gençten A., Saka I., Gumus S.

TURKISH JOURNAL OF PHYSICS, vol.30, no.3, pp.149-155, 2006 (ESCI)

### **Supported Projects**

Gümüş S., Project Supported by Higher Education Institutions, Vibrational analyses of 1,3-dibenzoyl-4,5-dihydro-1H-imidazole-2-thione and 1,3-dibenzoyl tetrahydropyrimidine-2(1H)-thione by normal coordinate treatment, 2014 - 2016