

# Prof. SEVGİ BAYARI

## Personal Information

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## International Researcher IDs

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## Education Information

Doctorate, Gazi University, Fen Fakültesi/Fen Bilimleri, Fizik/Atom Molekül, Turkey 1983 - 1989

Postgraduate, Ankara University, Fen Fakültesi/Fen Bilimleri, Astrofizik, Turkey 1981 - 1983

Undergraduate, Ankara University, Fen Fakültesi, Fizik-Astronomi, Turkey 1978 - 1981

## Foreign Languages

English, B2 Upper Intermediate

## Research Areas

Physics, Atomic and Molecular Physics, Natural Sciences

## Academic and Administrative Experience

Hacettepe Üniversitesi, Eğitim Fakültesi, Matematik ve Fen Bilimleri Eğitimi Bölümü, 2009 - 2009

## Courses

FİZİK LABORATUVARI IV, Undergraduate, 2021 - 2022

Akustik (Acoustics), Undergraduate, 2021 - 2022

GENEL FİZİK I VE II, Undergraduate, 2021 - 2022

FİZİK LABORATUVARI V (Kuantum Fiziği lab), Undergraduate, 2021 - 2022

SPEKTRAL ANALİZ YÖNTEMLERİ, Undergraduate, 2021 - 2022

Kuantum Fiziği I, Undergraduate, 2021 - 2022

## Advising Theses

Bayarı S., Grafen Takviyeli Epoksi Kompozitler, Postgraduate, İ.MELİK(Student), Continues

BAYARI S., Omega-6 Yağ Asitlerinin Moleküler Yapılarının ve Titreşim Spektrumlarının Deneysel ve Teorik Olarak İncelenmesi, Doctorate, T.GÖCEN(Student), 2018

BAYARI S., Rasajilin ve tuzlarının moleküler yapıları ve titreşimsel spektrumlarının teorik olarak incelenmesi, Postgraduate, Ü.CEREN(Student), 2011

BAYARI S., Antidepresan ilaç etken maddesi olan maprotilinin moleküler özelliklerinin ve diğer ilaçlarla etkileşimlerinin spektroskopik ve kuantum mekaniksel hesaplama yöntemi ile incelenmesi, Postgraduate, A.EVREN(Student), 2009

BAYARI S., Metilfenidat molekülünün moleküler yapısının ve titreşimsel spektrumunun teorik olarak incelenmesi, Postgraduate, B.SEYMEN(Student), 2008

BAYARI S., Histamin ve serotonin (5-HT) moleküllerinin titreşim spektrumlarının deneysel ve teorik olarak incelenmesi, Postgraduate, H.FEHMİ(Student), 2005

BAYARI S., Ofloksasin komplekslerinin ve ofloksasin-famotidin ilaç etken maddelerinin etkileşiminin infrared spektroskopisi ve teorik hesaplama yöntemleri ile incelenmesi, Doctorate, S.GÜNEŞDOĞDU(Student), 2004

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

- I. **In vitro comparison of nanofibrillar and macroporous-spongy composite tissue scaffolds for periodontal tissue engineering**  
ŞAHBAZOĞLU K. B., DEMİRBİLEK M., BAYARI S., BÜBER E., Toklucu S., TÜRK M., KARABULUT E., AKALIN F. A.  
CONNECTIVE TISSUE RESEARCH, vol.63, no.2, pp.183-197, 2022 (SCI-Expanded)
- II. **Evaluation of the protective effect on enamel demineralization of CPP-ACP paste and ROCS by vibrational spectroscopy and SAXS: An in vitro study**  
Akgun O. M., Bayari S., İDE S., Polat G. G., Yildirim C., Orujalipour I.  
MICROSCOPY RESEARCH AND TECHNIQUE, vol.84, no.12, pp.2977-2987, 2021 (SCI-Expanded)
- III. **Auxiliary differential diagnosis of schizophrenia and phases of bipolar disorder based on the blood serum Raman spectra**  
İldiz G. O., BAYARI S., Aksoy U. M., YORGUNER N., Bulut H., Yılmaz S. S., Halimoğlu G., Kabuk H. N., Yavuz G., Fausto R.  
JOURNAL OF RAMAN SPECTROSCOPY, vol.51, no.11, pp.2233-2244, 2020 (SCI-Expanded)
- IV. **Application of ATR-FTIR spectroscopy and chemometrics for the discrimination of human bone remains from different archaeological sites in Turkey**  
Bayari S., ÖZDEMİR K., Sen E. H., Araujo-Andrade C., ERDAL Y. S.  
SPECTROCHIMICA ACTA PART A-MOLECULAR AND BIOMOLECULAR SPECTROSCOPY, vol.237, 2020 (SCI-Expanded)
- V. **Fourier Transform Infrared Spectroscopy Based Complementary Diagnosis Tool for Autism Spectrum Disorder in Children and Adolescents**  
İldiz G. O., BAYARI S., Karadağ A., Kaygisiz E., Fausto R.  
MOLECULES, vol.25, no.9, 2020 (SCI-Expanded)
- VI. **Effects of chemical structures of omega-6 fatty acids on the molecular parameters and quantum chemical descriptors**  
Gocen T., Bayari S. H., Guven M. H.  
Journal of Molecular Structure, vol.1174, pp.142-150, 2018 (SCI-Expanded)
- VII. **Conformational and vibrational studies of arachidonic acid, light and temperature effects on ATR-FTIR spectra**  
Gocen T., Bayari S. H., Guven M. H.  
Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, vol.203, pp.263-272, 2018 (SCI-Expanded)
- VIII. **Structural studies on Demospongiae sponges from Gokceada Island in the Northern Aegean Sea**  
Bayari S., Şen E. H., İde S., Topaloglu B.  
SPECTROCHIMICA ACTA PART A-MOLECULAR AND BIOMOLECULAR SPECTROSCOPY, vol.192, pp.368-377, 2018 (SCI-Expanded)
- IX. **Linoleic acid and its potassium and sodium salts: A combined experimental and theoretical study**

Gocen T., Bayari S. H., Guven M. H.

JOURNAL OF MOLECULAR STRUCTURE, vol.1150, pp.68-81, 2017 (SCI-Expanded)

- X. **Micro- and nano-structural characterization of six marine sponges of the class Demospongiae**  
Sen E. H., İDE S., Bayari S., Hill M.  
EUROPEAN BIOPHYSICS JOURNAL WITH BIOPHYSICS LETTERS, vol.45, no.8, pp.831-842, 2016 (SCI-Expanded)
- XI. **The effect of monolithic zirconia thickness on the degree of conversion of dental resin cements: ATR-FTIR spectroscopic analysis**  
Bayindir B. C., Nemli S. K., Bayari S. H., Bal B. T.  
VIBRATIONAL SPECTROSCOPY, vol.86, pp.212-217, 2016 (SCI-Expanded)
- XII. **Structural effects of simvastatin on liver rate tissue: Fourier transform infrared and Raman microspectroscopic studies**  
Garip S., Bayari S. H., Severcan M., Abbas S., Lednev I. K., SEVERCAN F.  
JOURNAL OF BIOMEDICAL OPTICS, vol.21, no.2, 2016 (SCI-Expanded)
- XIII. **Micro- and Nanoscale Structures of Mesiodens Dentin: Combined Study of FTIR and SAXS/WAXS Techniques**  
Akgun O. M., Bayari S. H., İDE S., Polat G. G., Orujalipoor (Kalkhoran) I.  
MICROSCOPY RESEARCH AND TECHNIQUE, vol.78, no.1, pp.52-58, 2015 (SCI-Expanded)
- XIV. **Methylparaben Isolated in Solid Argon: Structural Characterization and UV-Induced Conversion into Methylparaben Radical and Isomeric Ketenes**  
Kus N., BAYARI S., Fausto R.  
JOURNAL OF PHYSICAL CHEMISTRY B, vol.117, no.43, pp.13543-13555, 2013 (SCI-Expanded)
- XV. **Structural investigation of boron undoped and doped indium stabilized bismuth oxide nanoceramic powders**  
Kocyigit S., Gokmen O., Temel S., Aytimur A., Uslu I., Bayari S. H.  
CERAMICS INTERNATIONAL, vol.39, no.7, pp.7767-7772, 2013 (SCI-Expanded)
- XVI. **Density functional investigation of the molecular structures, vibrational spectra and molecular properties of sulfonated pyridyl imine ligands and their palladium complexes**  
Eryurek M., BAYARI S. H., YÜKSEL D., Hanhan M. E.  
COMPUTATIONAL AND THEORETICAL CHEMISTRY, vol.1013, pp.109-115, 2013 (SCI-Expanded)
- XVII. **Structural alterations in rat liver proteins due to streptozotocin-induced diabetes and the recovery effect of selenium: Fourier transform infrared microspectroscopy and neural network study**  
Bozkurt O., Bayari S., Severcan M., Krafft C., Popp J., Severcan F.  
JOURNAL OF BIOMEDICAL OPTICS, vol.17, no.7, 2012 (SCI-Expanded)
- XVIII. **Theoretical investigation of the Anti-Parkinson drug rasagiline and its salts: Conformations and infrared spectra**  
Baköse U., Bayar S. H., Sağlam S., Özsk H.  
Central European Journal of Chemistry, vol.10, no.2, pp.395-406, 2012 (SCI-Expanded)
- XIX. **In situ photoproduction of dichlorodibenzo-p-dioxin from non-ionic triclosan isolated in solid argon**  
Kus N., Reva I., BAYARI S., Fausto R.  
JOURNAL OF MOLECULAR STRUCTURE, vol.1007, pp.88-94, 2012 (SCI-Expanded)
- XX. **Investigation of adhesive-dentin interfaces using Raman microspectroscopy and small angle X-ray scattering**  
Bayari S. H., Krafft C., İDE S., Popp J., Guven G., ÇEHRELİ Z. C., Soylu E. H.  
Journal of Raman Spectroscopy, vol.43, no.1, pp.6-15, 2012 (SCI-Expanded)
- XXI. **EXPERIMENTAL AND QUANTUM CHEMICAL STUDIES OF 5-FLUOROISATIN-3-(N-CYCLOHEXYLTHIOSEMICARBAZONE) AND ITS METAL COMPLEXES**  
Sagdic S. G., KANDEMİRLİ F., Oksoy B. K., BAYARI S.  
PHOSPHORUS SULFUR AND SILICON AND THE RELATED ELEMENTS, vol.187, no.10, pp.1243-1260, 2012 (SCI-Expanded)
- XXII. **Structural characterization of a variety of spider silks from Turkey using different biophysical techniques**

- DE S., Haman Bayari S., TÜRKEŞ T., MERGEN Y. O., Çelik Ö., Bütün V., SARGON M. F., KOCATEPE N., KRIECHBAUM M. SPECTROSCOPY-BIOMEDICAL APPLICATIONS, vol.25, pp.155-167, 2011 (SCI-Expanded)
- XXIII. **A Study on Marble Dust Nanocomposites.**  
Soylu E. H., İDE S., BAYARI S., Trasoglu E., Aksoy H.  
ACTA CRYSTALLOGRAPHICA A-FOUNDATION AND ADVANCES, vol.66, 2010 (SCI-Expanded)
- XXIV. **Thermal decomposition of allantoin as probed by matrix isolation FTIR spectroscopy**  
Kuş N., BAYARI S., Fausto R.  
Tetrahedron, vol.65, no.47, pp.9719-9727, 2009 (SCI-Expanded)
- XXV. **Structural and vibrational study of maprotiline**  
YAVUZ A. E., Haman Bayari S., KAZANCI N.  
Journal of Molecular Structure, pp.313-321, 2009 (SCI-Expanded)
- XXVI. **Theoretical and spectroscopic studies of 5-fluoro-isatin-3-(N-benzylthiosemicarbazone) and its zinc(II) complex**  
Sagdinc S., Koksoy B., Kandemirli F., Bayari S.  
JOURNAL OF MOLECULAR STRUCTURE, vol.917, pp.63-70, 2009 (SCI-Expanded)
- XXVII. **Theoretical study on gas-phase conformations and vibrational assignment of methylphenidate**  
Bayari S., Seymen B., Ozisik H., Saglam S.  
JOURNAL OF MOLECULAR STRUCTURE-THEOCHEM, vol.893, pp.17-25, 2009 (SCI-Expanded)
- XXVIII. **Novel Bone Nanocomposites: Preparation, FTIR and SWAXS Analysis**  
BAYARI S., İDE S., Soylu E. H., Rodoplu D., Vargi T., Yoldas A.  
ACTA CRYSTALLOGRAPHICA A-FOUNDATION AND ADVANCES, vol.65, 2009 (SCI-Expanded)
- XXIX. **Structural and vibrational investigation of 1, 2-bis(3, 4-dimethoxyphenyl) ethane-1, 2-dione (Veratril): Experimental and theoretical studies**  
Sengul A., Arslan H., BAYARI S., BUYUKGUNGOR O.  
Structural Chemistry, vol.19, no.3, pp.467-476, 2008 (SCI-Expanded)
- XXX. **Molecular structure and vibrational spectra of  $\gamma$ -oxo [1,1'-biphenyl]-4-butanoic acid (fenbufen) and its interaction with ofloxacin**  
Haman Bayari S., Sagdinc S.  
Structural Chemistry, vol.19, no.3, pp.381-390, 2008 (SCI-Expanded)
- XXXI. **Molecular structure and vibrational spectra of 4-, 5-, 6-chloroindole**  
Ozisik H., Saglam S., Bayari S.  
STRUCTURAL CHEMISTRY, vol.19, no.1, pp.41-50, 2008 (SCI-Expanded)
- XXXII. **Mucopolysaccharidosis type I (Hurler syndrome): oral and radiographic findings and ultrastructural/chemical features of enamel and dentin**  
GUVEN G., ÇEHRELİ Z. C., ALTUN C., ŞENÇİMEN M., İDE S., BAYARI S., KARAÇAY Ş.  
Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology and Endodontology, vol.105, no.1, pp.72-78, 2008 (SCI-Expanded)
- XXXIII. **Infrared spectrum, molecular structure and theoretical calculation of 2-pyridone-6-carboxylic acid**  
Arslan H., Şengül A., Aygün S., Karadayi N., BAYARI S.  
Journal of Molecular Structure, vol.839, pp.76-83, 2007 (SCI-Expanded)
- XXXIV. **Ab initio and density functional computations of the vibrational spectrum, molecular geometry and some molecular properties of the antidepressant drug sertraline (Zoloft) hydrochloride**  
Sagdinc S., Kandemirli F., Bayari S. H.  
Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, vol.66, no.2, pp.405-412, 2007 (SCI-Expanded)
- XXXV. **Synchrotron FT-IR microspectroscopic analysis of necrotic bone**  
Bayari S. H., UTKU H., IKEMOTO Y., Celasun B., Koemuercue M., ATIK A.  
SPECTROSCOPY-AN INTERNATIONAL JOURNAL, vol.21, no.4, pp.227-234, 2007 (SCI-Expanded)
- XXXVI. **Investigation of different substituents's affects to the crystal and molecular structures in some anesthetic compounds**  
Ozcan Y., Malkas H., Ayerden T., BAYARI S., İDE S.

- ACTA CRYSTALLOGRAPHICA A-FOUNDATION AND ADVANCES, vol.62, 2006 (SCI-Expanded)
- XXXVII. **Experimental and theoretical studies of the vibrational spectrum of 5-hydroxytryptamine**  
 Bayari S., Saglam S., Ustundag H.  
 JOURNAL OF MOLECULAR STRUCTURE-THEOCHEM, vol.726, pp.225-232, 2005 (SCI-Expanded)
- XXXVIII. **FTIR study of biodegradable biopolymers: P(3HB), P(3HB-co-4HB) and P(3HB-co-3HV)**  
 Bayari S., Severcan F.  
 JOURNAL OF MOLECULAR STRUCTURE, vol.744, pp.529-534, 2005 (SCI-Expanded)
- XXXIX. **Experimental and theoretical infrared spectra of famotidine and its interaction with ofloxacin**  
 SAGDINC S., Bayari S.  
 JOURNAL OF MOLECULAR STRUCTURE, vol.744, pp.369-376, 2005 (SCI-Expanded)
- XL. **Spectroscopic studies on the interaction of ofloxacin with metals**  
 Sagdinc S., Bayari S.  
 JOURNAL OF MOLECULAR STRUCTURE, vol.691, pp.107-113, 2004 (SCI-Expanded)
- XLI. **Theoretical study of ofloxacin: Geometrical parameters and vibrational wavenumbers**  
 Sagdinc S., BAYARI S.  
 Journal of Molecular Structure: THEOCHEM, vol.668, pp.93-99, 2004 (SCI-Expanded)
- XLII. **Coordination behaviour of nicotinamide: An infrared spectroscopic study**  
 BAYARI S., Ataç A., Yurdakul Ş.  
 Journal of Molecular Structure, vol.655, no.1, pp.163-170, 2003 (SCI-Expanded)
- XLIII. **Fourier transform infrared spectra and molecular structure of 5-methoxytryptamine, N-acetyl-5-methoxytryptamine and N-phenylsulfonamide-5-methoxytryptamine**  
 BAYARI S., İDE S.  
 Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, vol.59, no.6, pp.1255-1263, 2003 (SCI-Expanded)
- XLIV. **Infrared spectra and AM1 calculations of N-benzylideneanilines**  
 GÜNER V., BAYARI S.  
 Spectroscopy Letters, vol.35, no.1, pp.83-98, 2002 (SCI-Expanded)
- XLV. **Normal coordinate analysis of 4-aminopyridine. Effect of substituent on pyridine ring in metal complexes of 4-substituted pyridines**  
 Topaçlı A., Bayari S.  
 SPECTROCHIMICA ACTA PART A-MOLECULAR AND BIOMOLECULAR SPECTROSCOPY, vol.57, no.7, pp.1385-1391, 2001 (SCI-Expanded)
- XLVI. **Spectroscopic and structural studies on metal halide complexes of 4-vinylpyridine**  
 BAYARI S., İDE S., Yurdakul Ş.  
 Journal of Molecular Structure, vol.560, pp.95-103, 2001 (SCI-Expanded)
- XLVII. **The force field of 4-vinylpyridine and 4-vinylpyridine metal complexes**  
 Topaçlı A., BAYARI S.  
 Journal of Molecular Structure, vol.595, pp.93-99, 2001 (SCI-Expanded)
- XLVIII. **Vibrational spectroscopic studies on the T-d-type adeninemetal(II)tetracyanometallate(II) benzene clathrates:  $M(ad)(2)M'(CN)(4).C_6H_6$  ( $M = Mn$  or  $Cd$ ,  $M' = Cd$  or  $Hg$ )**  
 Bayari S., Bayrak C., Kantarci Z.  
 JOURNAL OF INCLUSION PHENOMENA AND MACROCYCLIC CHEMISTRY, vol.38, pp.23-35, 2000 (SCI-Expanded)
- XLIX. **A biomechanical and spectroscopic study of bone from rats with selenium deficiency and toxicity**  
 Turan B., Bayari S., Balcık C., Severcan F., Akkas N.  
 BIOMETALS, vol.13, no.2, pp.113-121, 2000 (SCI-Expanded)
- L. **Fourier transform infrared and Raman spectra of 4-vinylpyridine and its transition metal(II) tetracyanonickelate complexes**  
 Bayari S., Yurdakul S.  
 SPECTROSCOPY LETTERS, vol.33, no.4, pp.475-483, 2000 (SCI-Expanded)
- LI. **The infrared spectra of (dimen) and dimen-T(d)-type  $M(dimen)M'(CN)_4$  ( $M = Cd$  or  $Mn$ ;  $M' = Zn, Cd$  or  $Hg$ ) complexes**

- BAYRAK C., BAYARI S.  
Journal of Molecular Structure, pp.159-163, 1999 (SCI-Expanded)
- LII. **Structural information on transition metal(II) complexes of 4,4'-bipyridyl and 4-phenylpyridine from their infrared spectra**  
Bayari S., Topaçlı A., Salih B.  
JOURNAL OF MOLECULAR STRUCTURE, vol.482, pp.165-169, 1999 (SCI-Expanded)
- LIII. **FTIR and turbidity studies of fish oil-dipalmitoylphosphatidylcholine model membrane interactions**  
Severcan F., Bayari S., Karahan D.  
JOURNAL OF MOLECULAR STRUCTURE, vol.481, pp.413-416, 1999 (SCI-Expanded)
- LIV. **Urey-Bradley force field of 4-ethylpyridine**  
Topaçlı A., BAYARI S.  
Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, vol.55, pp.1389-1394, 1999 (SCI-Expanded)
- LV. **An infrared and Raman spectroscopic study on the Hofmann-T(d)-type complexes:  $ML_2M'(CN)_4$ ,  $M = Mn$  or  $Zn$ ,  $M' = Zn, Cd$  or  $Hg$ ,  $L = pyridine, \alpha-, \beta-$  or  $\gamma$ -picoline**  
Kantarci Z., Bayrak C., Bayar S.  
Journal of Molecular Structure, vol.407, pp.155-163, 1997 (SCI-Expanded)
- LVI. **Molecular force field of 4-cyanopyridine and its application to 4-cyanopyridine metal complexes**  
TOPAÇLI A., BAYARI S.  
Spectroscopy Letters, vol.29, no.2, pp.277-291, 1996 (SCI-Expanded)
- LVII. **The crystal and molecular structure of an antidepressant drug (isocarboxazid)**  
İDE S., TOPAÇLI A., BAYARI S.  
Crystal Research and Technology, vol.31, no.2, pp.187-195, 1996 (SCI-Expanded)
- LVIII. **An infrared spectroscopic study on Hofmann-type complexes of dimethyl sulfoxide**  
BAYARI S., Kantarci Z., Akyüz S.  
Journal of Molecular Structure, vol.351, pp.19-24, 1995 (SCI-Expanded)
- LIX. **The infrared and raman spectra of 4-phenylpyridine and its hofmann type complexes.**  
BAYARI S., Topaç A., Aydinli A.  
Spectroscopy Letters, vol.27, no.9, pp.1083-1096, 1994 (SCI-Expanded)
- LX. **AN INFRARED AND RAMAN-SPECTROSCOPIC STUDY OF TD-TYPE 4,4'-BIPYRIDYLCADMIUM(II) TETRACYANOMETALLATE(II) BENZENE(1/2) CLATHRATES -  $CD(C_{10}H_8N_2)CD(CN)_4 \cdot 2C_6H_6$  AND  $CD(C_{10}H_8N_2)HG(CN)_4 \cdot 2C_6H_6$**   
BAYARI S., KANTARCI Z., AKYUZ S.  
JOURNAL OF INCLUSION PHENOMENA AND MOLECULAR RECOGNITION IN CHEMISTRY, vol.17, no.3, pp.291-302, 1994 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Bilgisayarlı Tomografi, Pozitron Emisyon Tomografisi ve Nükleer Manyetik Rezonans Görüntülemeye Temel Kavram ve İlkeler.**  
BAYARI S. H., AKIN S., TUNCEL M.  
Batu Karadeniz Tıp Dergisi, vol.7, no.3, pp.269-278, 2023 (Peer-Reviewed Journal)
- II. **INVESTIGATION OF REGULAR AND HYPOALLERGENIC INFANT MILK FORMULAS BY ATR-FTIR SPECTROSCOPY COMBINED WITH MULTIVARIATE ANALYSIS METHODS**  
Yonar D., Bayarı S.  
GIDA, vol.48, no.1, pp.174-184, 2023 (Peer-Reviewed Journal)
- III. **Understanding heat-induced changes in human bone remains using ATR-FTIR combined with chemometrics**  
Özdemir K., Bayarı S., Şen E. H., Araujo-Andrade C., Erdal Y. S.  
Eurasian Journal of Anthropology, vol.12, no.2, pp.67-82, 2022 (Peer-Reviewed Journal)

- IV. **ATR-FTIR, SAXS and UV-Vis Studies of Silicone Hydrogel and Bio-Hydrogel Soft Contact Lenses**  
Bayarı S., Göcen T., Bacioğlu A., İde S.  
Asian Journal of Applied Chemistry Research, vol.12, no.1, pp.1-16, 2022 (Peer-Reviewed Journal)
- V. **The Effect of Polymethylsilsequioxane Concentration on the Liquid Foundation: Characterization of Nanostructure and Biophysical Properties**  
Kaya P., Su C. J., Bacioğlu A., Gür S. D., Bayarı S., Lian B. J., Jeng U., İde S.  
Asian Journal of Physical and Chemical Sciences, pp.32-45, 2021 (Scopus)
- VI. **A Structural Investigation on Polystyrene with Cyclohexene Mid-Chain Group: Thermal Stability and Self-Assembly Kinetics in Nonpolar and Polar Aprotic Solutions**  
Orujalipoor I., İde S., Bayarı S., Değirmenci M., Çelik Ö.  
Asian Journal of Applied Chemistry Research , vol.8, no.1, pp.1-12, 2021 (Peer-Reviewed Journal)
- VII. **Vibrational and DFT Studies of Creatinine and Its Metal Complexes**  
BAYRAK C., BAYARI S.  
Hacettepe Journal of Biology and Chemistry, vol.38, pp.107-118, 2010 (Peer-Reviewed Journal)

## Books & Book Chapters

- I. **Optisyonlik Tarihi İle İlgili Giriş**  
Bayarı S.  
in: Fundamentals of opticianry, Mümin Mehmet Koç, Editor, Akademisyen Yayınevi Kitabevi, Ankara, pp.3-20, 2024
- II. **Blood serum–infrared spectra-based chemometric models for auxiliary diagnosis of autism spectrum disorder**  
Öğrüş İldız G., Bayarı S., Yorguner N., Fausto R.  
in: Neural Engineering Techniques for Autism Spectrum Disorder Volume 1: Imaging and Signal Analysis, Ayman S. El-Baz, Jasjit S. Suri, Editor, Academic Press , Massachusetts, pp.185-213, 2021
- III. **Applications of Vibrational Spectroscopy in Diagnosis and Screening of Dental Tissues**  
Bayarı S.  
in: Vibrational Spectroscopy in Diagnosis and Screening, Feride Severcan, Parvez I. Haris, Editor, IOS Press , Amsterdam, pp.304-320, 2012
- IV. **The FTIR studies of the poly(3-hydroxybutyrate) and poly(3-hydroxybutyrate-co-3-hydroxyvalerate)**  
BAYARI S.  
in: New Biomedical materials Basic And Applied Studies, Parvez I Haris and Denis Chapman, Editor, IOS Press, pp.58-64, 1998

## Refereed Congress / Symposium Publications in Proceedings

- I. **Polymethylsilsequioxane Concentration Effects on the Nanostructures and the Biophysical Properties of some Foundations and BB Creams**  
kaya p., Karaarslan D., Su C. J., BACIOĞLU A., DİKEN GÜR S., BAYARI S., Jeng U., İDE S.  
4th International Turkish Congress on Molecular Spectroscopy (TURCMOS2019), Aydın, Turkey, 5 - 09 August 2019
- II. **Spectroscopic and Optical Properties of Silicone Hydrogel Contact Lenses**  
BAYARI S., BACIOĞLU A., GÖCEN T., ÇAVUS A. O.  
XXXIV EUROPEAN CONGRESS ON MOLECULAR SPECTROSCOPY - EUCMOS 2018, Coimbra, Portugal, 19 - 24 August 2018, pp.327
- III. **In vitro comparison of nanofiber and macroporous-spongy composite tissue- scaffolds in periodontal tissue engineering**  
Şahbazoglu K. B., AKALIN F. A., DEMİRBILEK M., TÜRK M., BAYARI S.

Turkish Society of Periodontology 47th International Scientific Congress and 26th Scientific Symposium 17-18 November 2017, Istanbul, Turkey, 17 - 18 November 2017, pp.51

- IV. **FTIR Spectroscopic Studies of Spider Dragline Silk of Different Species**  
BAYARI S., TURKES T., CHUANG W. T.  
TURCMOS2017, 26 August 2017 - 29 August 2018, pp.343
- V. **A Study on Silk Cocoon Membranes of A.lobata and A.bruennichi : Structural Characterization, Electricity and Bioactivity**  
Chuang W. T., İDE S., User J., BAYARI S., Orujalipoor I., TÜRKEŞ T.  
23. User Meeting and Workshop, 5 - 08 August 2017
- VI. **Diagenic Alterations in the Anthropological Bone Mineral Structure FT IR spectroscopy and SAXS studies**  
BAYARI S., BAYARI S., ÖZDEMİR K., İDE S., ERDAL Y. S., Orujalipoor I.  
II. International Congress of Molecular Spectrometry, 13 - 18 September 2015
- VII. **Analysis of Normal and Rickets Human Skeletal Remains by FT IR spectroscopy and SAXS**  
BAYARI S., ÖZDEMİR K., İDE S., ERDAL Y. S., Orujalipoor I., ŞEN E.  
II. International Congress on Molecular Spectroscopy, 13 - 18 September 2015
- VIII. **Conformational and vibrational studies of triclosan**  
Özişik H., BAYARI S., Sağlam S.  
7th International Conference of the Balkan Physical Union, Alexandroupoli, Greece, 9 - 13 September 2009, vol.1203, pp.1227-1232
- IX. **Structural Investigation on some Silk (Dragline, Hiding and Egg-Cocoon) Samples Weaved by Different Species Living in Turkey**  
İDE S., ARIĞ A., TÜRKEŞ T., MERGEN Y. O., BAYARI S., ÇELİK Ö.  
XXIX European Congress on Molecular Spectroscopy. Eucmos 2008, Croatia, Croatia, 31 August 2008, pp.188
- X. **A DFT study of the structural and vibrational properties of alpha,omega-diamines**  
Sağlam S., Ozbay A., BAYARI S.  
6th International Conference of the Balkan-Physical-Union, İstanbul, Turkey, 22 - 26 August 2006, vol.899, pp.557
- XI. **Structural Characterizations of Silks and Egg-Cocoons Produced By The Spiders Living in The Central Anatolian Region**  
ÖZCAN Y., İDE S., GÜNEŞ B., BAYARI S., DİLEK N., MERGEN Y. O., SARGON M. F.  
6th International Conference of the Balkan Physical Union, İstanbul, Turkey, 22 August 2006, pp.1117
- XII. **The FT IR Spectra and Assignments of 1 Aza 1 3 butadienes Conformational Changes with Substituents**  
BAYARI S., GÜRSOY V.  
First Hellenic-Turkish International Physics Conference, Bodrum, Bodrum, 10 October - 15 September 2001
- XIII. **Infrared Spectra and Theoretical Calculations of the Structure of N Benzylideneanilines**  
BAYARI S., GÜRSOY V.  
Colloquium Spectroscopium Internationale XXXI, 5 - 10 September 1999

## Other Publications

- I. **Molecular spectroscopy and molecular structure – Selected communications presented at the 1st International Turkish Congress on Molecular Spectroscopy (TURCMOS 2013)**  
BAYARI S.  
Other, pp.523-524, 2016

## Supported Projects

BAYARI S., GÖCEN T., BACIOĞLU A., ARSLAN H., Project Supported by Higher Education Institutions, PMMAcoPHEMA ve



PMMAcoPnBMA Kopolimerlerinin Sentezi Karakterizasyonu ve Lens Materyali Olarak Kullanımının Araştırılması, 2019 - 2021

Öğrüç İldız G., Bayarı S., TUBITAK Project, "Şizofren ve Bipolar Hastalıkların ve Alt Gruplarının Sınıflandırılması ve Ayırıştırılmasında Kullanılacak Biyoşaretlerin Titreşimsel Spektroskopik ve Kemometrik Analiz Yöntemleri Kullanılarak Belirlenmesi, 2016 - 2021

BAYARI S., İDE S., BACIOĞLU A., IŞIK GÖCEN T., Project Supported by Higher Education Institutions, Silikon Hidrojel Kontak Lenslerin Spektroskopik ve Optik Özelliklerinin Araştırılması, 2018 - 2019

Bayarı S., İde S., Türkeş T., Demir H., TUBITAK Project, KBAG 214Z049 Türkiyenin Doğu Karadeniz Bölgesi ile Tayvanın kuzey bölümünde yaşayan örümceklerin ağları üzerine nano mikro skalada ileri yapısal analizler, 2015 - 2019

BAYARI S., Project Supported by Higher Education Institutions, Omega yağ asitlerinin moleküler yapı parametreleri ve titreşim frekans hesapları, 2016 - 2017

BAYARI S., ŞEN E. H., Project Supported by Higher Education Institutions, Türkiye orjinli bazı deniz süngerlerinin moleküler yapı özellikleri, 2016 - 2017

BAYARI S., Project Supported by Higher Education Institutions, Antropolojik örneklerde Temel Bileşenler Analizi (PCA), 2015 - 2016

BAYARI S., İDE S., ÖZDEMİR K., TUBITAK Project, Anadolu arkeolojik topluluklarındaki iskelet kemik kalıntılarının mineral ve organik yapılarında diyagenez etkisiyle oluşan değişimin mikro ve nano düzeyde belirlenmesi ve bölgesel farklılıkların incelenmesi, 2014 - 2016

BAYARI S., Project Supported by Higher Education Institutions, B12 vitaminin sulu çözeltilerinin zamana ve sıcaklığa bağlı titreşimsel spektroskopi ile incelenmesi, 2015 - 2015

BAYARI S., TUBITAK Project, Periodontal Doku Mühendisliğinde Nanofibriler ve Makropöröz Süngerimsi Doku İskelelerinin in vitro Karşılaştırılması, 2013 - 2014

Bayarı S., Project Supported by Higher Education Institutions, In vitro kimyasal etki ile diş yapısında meydana gelebilecek yapısaldeğişikliklerin farklı deneysel yöntemler ile incelenmesi, 2013 - 2014

## Memberships / Tasks in Scientific Organizations

TURK FIZIK VAKFI, Board Member, 2005 - Continues

## Metrics

Publication: 87

Citation (WoS): 1080

Citation (Scopus): 1005

H-Index (WoS): 17

H-Index (Scopus): 17

## Congress and Symposium Activities

XXXIV European Congress on Molecular Spectroscopy - EUCMOS 2018, Attendee, Coimbra, Portugal, 2018

## Scholarships

Yükseköğretim Kurulu Yurtdışı Araştırma Bursu- Albany Üniversitesi Amerika , YOK, 2012 - 2012

Araştırma bursu -Institut für Photonische Technologien- Jena Almanya, Special Institutions and Organizations, 2010 - 2010

TÜBİTAK NATO bursu-De Monfort Üni. İngiltere, TUBITAK, 1997 - 1997

Lisans üstü (YL ve Doktora bursu), TUBITAK, 1982 - 1985

## **Non Academic Experience**

Hacettepe Universitesi