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PERSONAL

Date of Birth	February 1979
Place of Birth	Amsterdam/Netherlands

EDUCATION

2005-2009	Goethe University, Biophysics, Ph.D.
2001-2003	Middle East Technical University, Physics, M.S.
1997-2001	Middle East Technical University, Physics Education, B.S.

ACADEMIC POSITIONS

October/2022	Professor, Department of Electrics and Electronics Engineering, Atılım University, Turkey
September/2017	Associate Professor, Department of Electrics and Electronics Engineering, Atılım University, Turkey
January/2012-September/2017	Assistant Professor, Department of Electrics and Electronics Engineering, Atılım University, Turkey
May/2009-January/2012	Instructor, Department of Electrics and Electronics Engineering, Atılım University, Turkey
2005-2009	Research Assistant, Goethe University, Institut für Biophysik, Germany
2001-2005	Research Assistant, Department of Electrics and Electronics Engineering, Atılım University, Turkey

RESEARCH INTERESTS

1	Structure and function of proteins/enzymes
2	Protein-membrane interaction
3	Spectroscopic analysis of bodily fluids
4	FTIR Spectroscopy

PROFESSIONAL SERVICE

1	Editorial Board Member, Spectrochimica Acta Part A, Molecular and Biomolecular Spectroscopy (Elsevier)
2	Regular Referee, Spectrochimica Acta Part A, Molecular and Biomolecular Spectroscopy (Elsevier)
3	Regular Referee, Journal of Biophotonics (Wiley)

PUBLICATIONS

1	Erkoç, E., Tüzün, İ., Korkmaz, F., San Keskin, N.O. and Koçberber Kiliç, N. Nanoremediation of toxic dyes using a bacterial consortium immobilized on cellulose acetate nanofiber mats, Polym. Eng. Sci., 64, 339–349, 2024.
2	İrem Gündüz, A., Erkoç, E., Korkmaz, F. and Koçberber Kiliç, N. Simultaneous Removal of Setazol Navy Blue and Cr(VI) By Mixed Microbial Culture Isolated from the Çubuk Stream, Water, Air, Soil Pollut., 235:345 2024.
3	Sarigul, N., Bozatlı, L., Kurultak, İ., Korkmaz, F. Using urine FTIR spectra to screen autism spectrum disorder, Sci. Reports 13:1, 1–12, 2023.
4	Kurultak, İ., Sarigul, N., Kodal, N.S., and Korkmaz, F. Urinalysis of individuals with renal hyperfiltration using ATR-FTIR spectroscopy, Scientific Reports, 12(1), 20887, 2022.
5	Yılmaz, İ. and Korkmaz, F. Investigations of pH-dependent dynamic properties of OmpG-16SL, an outer membrane protein G mutant by ATR-FTIR spectroscopy, Biochim. Biophys. Acta - Proteins Proteomics, 1870, 140780, 2022.
6	Sarigul, N., Kurultak, İ., Gökçeoglu, A.U., Korkmaz, F. Urine analysis using FTIR spectroscopy: A study on healthy adults and children, J. Biophotonics, 14, e202100009, 2021.
7	Yılmaz, İ., Yıldız, Ö., Korkmaz, F. Structural properties of an engineered outer membrane protein G mutant, OmpG-16SL, investigated with infrared spectroscopy, J. Biomol. Struct. Dyn., 38, 2104–2115, 2020.
8	Sarigul, N., Korkmaz, F., Kurultak, İ. A New Artificial Urine Protocol to Better Imitate Human Urine, Scientific Reports, 9, 20159, 2019.
9	Korkmaz, F., van Pee, K., Yildiz, O. IR spectroscopic characterization of an elongated OmpG mutant. Archives of Biochemistry and Biophysics, 576, 73-79, 2015.
10	Korkmaz, F., Erdogan, Deniz A., Ozalp-Yaman, Seniz. Interaction of a Novel Platinum Drug with Bovine Serum Albumin: FTIR and UV-Vis Spectroscopy Analysis. New Journal of Chemistry, 39, 5676-5685, 2015.
11	Korkmaz, F., Commentary on “spectral characterization of the binding and conformational changes of serum albumins upon interaction with an anticancer drug, anastrozole”. Spectrochimica Acta Part A: Molecular and Biomolecular spectroscopy, 138, 967-968, 2015.
12	Isik M, Gassanly NM, Korkmaz F. Compositional Dependence of Optical Modes Frequencies in TlGa _x In _{1-x} S ₂ Layered Mixed Crystals (0 ≤ x ≤ 1). Acta Physica Polonica A, 126, 747–751, 2014.
13	Korkmaz, F., Ressler, S., Ziegler C., Maentele, W. K ⁺ -induced conformational changes in the trimeric betaine transporter BetP monitored by ATR-FTIR spectroscopy. Biochimica et Biophysica Acta – Biomembranes, 1828, 1181-1191, 2013.
14	Isik, M. Gassanly, N.M., Korkmaz F. Infrared and Raman Scattering spectra of layered structured Ga ₃ InSe ₄ crystals. Physica B 412, 61-63, 2013.
15	Isik, M. Gassanly, N.M., Korkmaz F. Multiphonon absorption processes in layered structured TlGaS ₂ , TlInS ₂ and TlGaSe ₂ single crystals. Physica B 421, 50-52, 2013.

16	Korkmaz, F., Koester, S., Yildiz, O., Maentele, W. In situ opening/closing of OmpG from E. coli and the splitting of beta-sheet signals in ATR-FTIR spectroscopy. <i>Spectrochimica Acta Part A-Molecular and Biomolecular Spectroscopy</i> , 91, 395-401, 2012.
17	Korkmaz-Özkan, F., Köster, S., Yildiz, Ö., Kühlbrandt, W., Maentele, W. Correlation between the OmpG secondary structure and its pH-dependent alterations monitored by FTIR. <i>Journal of Molecular Biology</i> , 401, 56-67, 2010.
18	Korkmaz, F., Severcan, F., Aflori, M., Dorohoi, D.O. Temperature influence on the dipalmitoylphosphatidylcholine-model membranes studies by FTIR. <i>Digest J. of Nanomaterials and Biostructures</i> , 3, 55-61, 2008.
19	Korkmaz, F., Köster, S., Yildiz, Ö. and Mäntele, W. The role of lipids for the functional integrity of porin: an FTIR study using lipid and protein reporter groups. <i>Biochemistry</i> , 47, 12126-12134, 2008.
20	Erkoc, S., Korkmaz, F. Structural and electronic properties of the DPPC molecule. <i>Int. J. Mod. Phys. C</i> , 17, 967-974, 2006.
21	Korkmaz, F. and Severcan, F. Effect of progesterone on DPPC membrane: Evidence for lateral phase separation and inverse action in lipid dynamics. <i>Archives of Biochemistry and Biophysics</i> , 440, 141-147, 2005.
22	Korkmaz, F., Kirbiyik H. and Severcan, F. Concentration dependent different action of progesterone on the order, dynamics and hydration states of the headgroup of dipalmitoyl-phosphatidylcholine. <i>Spectroscopy-An International Journal</i> , 19, 213-219, 2005.

PROJECTS

1	Investigation of the observed diversity among healthy human urines by using some natural urine components in artificial urine system using FTIR spectroscopy. Atılım University ADP, ATÜ-ADP-2122-01, December 2021-December 2022.
2	Investigation of Structural and Functional Properties of OmpG-16S and OmpG-16SL by FTIR Spectroscopy. TUBITAK 3501 national funding program, code: 214Z085, May 2015-November 2017.
3	Comparison of Wild Type OmpG and Its Genetically Engineered Mutant Using FTIR Spectroscopy. TUBITAK 1002 national funding program, code: 211T179, 2012-2013.
4	Biophysics Laboratory. Atılım University Research Laboratory Project Fund (ALP), code: ATÜ-ALP-1011-01, 2011-2014.

CONFERENCE PRESENTATIONS

1	F. Korkmaz. Kızılötesi spektroskopisinin biyolojik malzeme çalışmalarındaki potansiyeli. 25. Yoğun Madde Fiziği Ankara Toplantısı, Ankara, Turkey. Invited talk. 20 December 2019
2	Y. Adiguzel, F. Korkmaz. Protein Secondary Structure Analysis with ATR FTIR. International Congress on Biological and Medical Sciences, Niğde, Turkey. Oral presentation. 2018.
3	İ. Yılmaz, Ö. Yildiz, F. Korkmaz. OmpG-16SL, an engineered porin, investigated using infrared spectroscopy. 6th International BAU Drug Design Congress, İstanbul, Turkey. Oral presentation. 2018.
4	Y. Adiguzel, F. Korkmaz. Study on the Protein Secondary Structure Analysis with ATR FT-IR. 5th International BAU Drug Design Congress, İstanbul, Turkey. Oral presentation. 2017.
5	F. Korkmaz, K. van Pee and Ö. Yildiz. Structural and functional characterization of OmpG-16S, an elongated OmpG mutant, investigated by FTIR spectroscopy. The 7 th EMBO Meeting, Mannheim, Germany. Poster #374B, Book of abstracts pp.377. September 2016

6	İ. Yılmaz, K. van Pee, Ö. Yildiz and F. Korkmaz. Two engineered proteins; OmpG-16S and OmpG-16SL, investigated by FTIR spectroscopy. The 7 th EMBO Meeting, Mannheim, Germany. Poster #384C, Book of abstracts pp.387. September 2016
7	İ. Yılmaz, Ö. Yildiz and F. Korkmaz. pH-dependent conformational changes and thermal stability of outer membrane protein G mutants by Fourier Transform Infrared Spectroscopy. The 41 st FEBS Congress, İzmir, Turkey. The FEBS Journal 283 (Suppl.1) 2016, pp214. August 2016
8	F.Korkmaz, A.Doğan and Y.Adıgüzel. Web-server based structure predictions as supplementary tool for secondary structure analysis of proteins with FTIR. 4 th International BAU Drug Design Congress, İstanbul, Turkey, oral presentation. October 2016
9	İ.Yılmaz, A.Bek and F.Korkmaz. Kızılötesi izgeçözlemin sınırlarını zorlamak: sıvı örneklerle çalışma. 22. Yoğun Madde Fiziği Toplantısı, Ankara, Turkey. Poster presentation. December 2016
10	F. Korkmaz, K. van Pee and Ö. Yildiz. Outer Membrane protein OmpG from E.coli and its Engineered mutant OmpG-16S. 2 nd International BAU Drug Design, İstanbul, Turkey, oral presentation. April 2014.
11	F. Korkmaz. Physics Course Assessment in Engineering Education. 2 nd International Engineering Education Conference: New Trends and Expectations, Antalya, Turkey, oral presentation. November, 2012
12	B.S. İsgör, Y.G. İlgör, F. Korkmaz, Ö.Özgen, S.Ertan. Success trends of engineering students in science courses: a 3 year survey. 2 nd International Engineering Education Conference: New Trends and Expectations, Antalya, Turkey, oral presentation. November, 2012
13	Korkmaz, F. Ziegler, C, Mäntele, W. Secondary structure properties of activation of BetP from <i>Corynebacterium glutamicum</i> . The 3 rd EMBO Meeting, Vienna, Austria. Poster #294. September, 2011
14	Korkmaz, F. Köster, S., Yildiz, Ö. and Mäntele, W. The role of lipids for the functional integrity of OmpF and OmpG porins: An analysis by FTIR spectroscopy. The Joint Biophysical Society 52 nd Annual Meeting, Long Beach, California, USA. Poster # 2064. February, 2008
15	Köster, S., Yildiz, Ö., Hizlan, D., Korkmaz, F. and Kühlbrandt, W. Structure of the monomeric outer-membrane protein OmpG in the open and closed conformation. Gordon Conference: Ligand Recognition & Molecular Gating, Ventura, CA, USA. March, 2008
16	Korkmaz, F. and Mäntele, W. The role of lipids for the functional integrity of porin: An analysis by FTIR spectroscopy. 12 th European Conference on the Spectroscopy of Biological Molecules, Bobigny, France. Poster # 194. September, 2007
17	Korkmaz, F. and Mäntele, W. Detecting markers for functional integrity of a protein by FTIR. Deutsche Gesellschaft für Biophysik, Mainz, Germany. Poster # 56. September, 2006
18	Korkmaz, F and Severcan, F. Effect of progesterone of DPPC membrane. 11 th European Conference on the Spectroscopy of Biological Molecules, Aschaffenburg, Germany. Poster # 281FK. September, 2005
19	Korkmaz, F and Severcan, F. 13th Balkan Biochemical and Biophysical Days & Meeting on Metabolic Disorders. Kuşadası, Turkey. Poster has been awarded a Mension Prize. October, 2003

CITATIONS

Sum of times cited without self-citations (ISI Web of Science):	430
H-index (ISI Web of Science):	9

COURSES GIVEN

1	Physics I-Mechanics (PHYS101)
2	Physics II-Electricity and Magnetism (PHYS102)
3	Introduction to Electromagnetic Theory (PHYS702)
4	Electromagnetic Theory (PHYS502)
5	Biophysics (PHYS519)
6	Action Potentials in Neuron Model (MED103)
7	Innervation of Skeletal and Smooth Muscle Cells (MED104)
8	Biophysics of Senses (MED203)
9	Biophysical Properties of Blood and Circulation, EKG (MED202)
10	Introductory Thermodynamics (MED108, Altınbaş University)
11	Biomechanics (MED108, Altınbaş University)

THESES SUPERVISED/CO-SUPERVISED

1	MS Thesis, Investigation of structural and functional properties of OmpG mutants by FTIR spectroscopy, 2017.
2	MS Thesis, Spectroscopic investigation of the effect of novel platinum blue on BSA and HSA", 2017.
3	MS Thesis, Spectroscopic investigations on DNA and BSA binding ability of a new platinum (II) complex containing 5,6-di(pyridine-2-yl)-2,3-dihydropyrazine ligand, 2017.
4	MS Thesis, Structural and ellipsometric properties of GaS(x)Se(1-x) layered mixed crystals, 2017.
5	MS Thesis, Understanding the diversity among human urines using an artificial urine system and FTIR spectroscopy, 2023.

POPULAR SCIENCE JOURNAL ARTICLES

1	B. İşgör ve F. Korkmaz "İlaç araştırmalarında yeni nesil uygulamalar" Cumhuriyet Bilim ve Teknoloji Dergisi. Yayın Yeri: Ankara, Yayın Tarihi: 21.09.2012, Sayı: 1331.
2	F. Korkmaz ve E.Gökçay "Manyetik alan dersleri artık daha kolay öğreniliyor" İz Dergisi. Yayın Yeri: Ankara, Yayın Tarihi: Haziran 2011.
3	F. Korkmaz "Yaşamın anahtarı: Proteinler" Herkese Bilim Teknoloji. Yayın Yeri: İstanbul, Yayın Tarihi: 23 Aralık 2016, Sayı:39.
4	İ. Yılmaz ve F. Korkmaz "İnsanları etkileyen grip virüsleri" Herkese Bilim Teknoloji. Yayın Yeri: İstanbul, Yayın Tarihi: 9 Aralık 2016, Sayı:37.
5	İ. Yılmaz ve F. Korkmaz "Curie Ailesi: Bilim hayalinin peşinde" Herkese Bilim Teknoloji. Yayın Yeri: İstanbul, Yayın Tarihi: 6 Ocak 2017, Sayı:41.
6	Y. Pekön ve F. Korkmaz "Komşu gezegenleri yeterince tanıyor musunuz?" Herkese Bilim Teknoloji. Yayın Yeri: İstanbul, Yayın Tarihi: 13 Ocak 2017,

	Sayı:42.
7	F. Korkmaz ve R.Aydın "Fizik dünyasında son gelişme: Kütleçekim dalgalarının kaydedilmesi" Herkes Bilim Teknoloji. Yayın Yeri: İstanbul, Yayın Tarihi: 17 Kasım 2017, Sayı:86.