

## Asst. Prof. GÜLBİN KURTAY

### Personal Information

**Mobile Phone:** [+90 530 657 8997](tel:+905306578997)

**Email:** [gulbinkurtay@hacettepe.edu.tr](mailto:gulbinkurtay@hacettepe.edu.tr)

**Other Email:** [gulbinkurtay@gmail.com](mailto:gulbinkurtay@gmail.com)

**Web:** <https://avesis.hacettepe.edu.tr/gulbinkurtay>

### International Researcher IDs

ScholarID: GqljTL4AAAAJ

ORCID: 0000-0003-0920-8409

Publons / Web Of Science ResearcherID: AAK-5557-2021

ScopusID: 36161184500

Yoksis Researcher ID: 114791

### Education Information

Postgraduate, Ankara University, Eğitim Bilimleri Enstitüsü, Bilgisayar ve Öğretim Teknolojileri Eğitimi, Turkey 2020 - Continues

Post Doctorate, Université Bordeaux I, Institut des Sciences Moléculaires, France 2021 - 2022

Post Doctorate, Université Bordeaux I, Institut des Sciences Moléculaires, France 2017 - 2018

Doctorate, Ankara University, Fen Fakültesi, Kimya Bölümü, Turkey 2006 - 2014

Undergraduate, Anadolu University, İktisat Fakültesi, Çalışma Ekonomisi Ve Endüstri İlişkileri Bölümü, Turkey 2003 - 2007

Undergraduate, Ankara University, Fen Fakültesi, Kimya Bölümü, Turkey 1999 - 2006

### Foreign Languages

French, C1 Advanced

English, C2 Mastery

German, B1 Intermediate

### Research Areas

Organic Chemistry

### Academic Titles / Tasks

Assistant Professor, Hacettepe University, Fen Fakültesi, Kimya Bölümü, 2022 - Continues

Assistant Professor, Ankara University, Fen Fakültesi, Kimya Bölümü, 2019 - 2022

Lecturer, Ankara University, Fen Fakültesi, Kimya Bölümü, 2016 - 2019

Research Assistant, Ankara University, Fen Fakültesi, Kimya Bölümü, 2011 - 2019

## Academic and Administrative Experience

Fakülte Kurulu Üyesi, Ankara University, Fen Fakültesi, 2019 - 2022

Deputy Quality Coordinator, Ankara University, 2016 - 2017

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

- I. **Comprehensive analysis of Alpelisib detection: Uniting molecular docking, dynamics, and precision electrochemistry at the PEDOT:PSS-carbon paste interface**  
Bouali W., KURTAY G., Genc A. A., ERK N.  
MICROCHEMICAL JOURNAL, vol.204, 2024 (SCI-Expanded)
- II. **Electrochemical Detection of Melphalan in Biological Fluids Using a g-C<sub>3</sub>N<sub>4</sub>@ND-COOH@MoSe<sub>2</sub> Modified Electrode Complemented by Molecular Docking Studies with Cellular Tumor Antigen P53**  
ERK N., KURTAY G., Bouali W., Sakal Z. G., Genc A. A., ERBAŞ Z., Soylak M.  
ACS OMEGA, no.19, pp.21058-21070, 2024 (SCI-Expanded)
- III. **Influence of bulky peripheral substituents on subphthalocyanine derivatives: Implications for photocatalytic and photoelectrochemical hydrogen production**  
Doğan Ş., Güntay B., Kübra Demircioğlu P., Osman Akyıldız Y., Koca A., Aslan E., KURTAY G., Hatay Patir İ., Ince M.  
Fuel, vol.358, 2024 (SCI-Expanded)
- IV. **Redefining precision in cancer Treatment: A novel electrochemical approach using bimetal oxide composites for Niraparib quantification**  
Hatun Yıldır M., KURTAY G., Bouali W., Ayşe Genç A., ERK N.  
Microchemical Journal, vol.196, 2024 (SCI-Expanded)
- V. **Nanodiamond (ND)-Based ND@CuAl<sub>2</sub>O<sub>4</sub>@Fe<sub>3</sub>O<sub>4</sub> electrochemical sensor for Tofacitinib detection: A unified approach to integrate experimental data with DFT and molecular docking**  
Bouali W., KURTAY G., Genç A. A., Ahmed H. E. H., SOYLAK M., ERK N., Karimi-Maleh H.  
Environmental Research, vol.238, 2023 (SCI-Expanded)
- VI. **New explosive materials through covalent and non-covalent synthesis: Investigation of explosive properties of trinitrotoluene: Acridine and picric acid: Acridine**  
Şen N., Pons J., KURTAY G., Yüksel B., NAZIR H., Khumsri A., ATAKOL O.  
Journal of Molecular Structure, vol.1292, 2023 (SCI-Expanded)
- VII. **In Vitro and In Silico Evaluation of Amylase, Tyrosinase, and Pancreatic Lipase Inhibitions of Novel Benzothiazole-Sulfonate Derivatives**  
Korkmaz A., Bursal E., KURTAY G.  
ChemistrySelect, vol.8, no.42, 2023 (SCI-Expanded)
- VIII. **Iron-Catalyzed Oxidative Decarboxylation of Oxamic Acids: A Safe and Efficient Photochemical Route to Urethanes**  
Landais Y., Kurtay G., Robert F., Lusseau J.  
SYNLETT, vol.1, no.1, pp.1-10, 2023 (SCI-Expanded)
- IX. **Computational insights into bis-N,N-dimethylaniline based D-π-A photosensitizers bearing divergent-type of π-linkers for DSSCs**  
NALÇAKAN H., KURTAY G., Sarıkavak K., Şen N., SEVİN DÜZ F.  
Journal of Molecular Graphics and Modelling, vol.122, 2023 (SCI-Expanded)
- X. **Subphthalocyanines for Visible-Light-Driven Hydrogen Evolution: Tuning Photocatalytic Performance with Molecular Design**  
Güntay B., Dogan S., Killi A., Genc Acar E., Demircioğlu P. K., Aslan E., KURTAY G., Hatay Patir I., Ince M.  
ACS Applied Energy Materials, vol.6, no.12, pp.6607-6614, 2023 (SCI-Expanded)
- XI. **Design, synthesis, spectroscopic characterizations, in vitro pancreatic lipase as well as tyrosinase inhibition evaluations and in silico analysis of novel aryl sulfonate-naphthalene hybrids**

- Korkmaz A., Kurtay G., Kaya E., Bursal E.  
Journal of Biomolecular Structure and Dynamics, vol.41, no.15, pp.7128-7143, 2023 (SCI-Expanded)
- XII. **On the viability of divergent donor moieties in malononitrile-based donor- $\pi$ -acceptor NLO active materials: A DFT/TD-DFT study**  
Yahya M., Kurtay G., Suvitha A. R.  
Journal of Physical Organic Chemistry, vol.35, no.10, 2022 (SCI-Expanded)
- XIII. **Improved stability of picric acid: 1-aminopyrene' charge-transfer complex: Synthesis, characterization, energetic performance and molecular docking study with B-DNA**  
Kurtay G., Şen N.  
Journal of Molecular Structure, vol.1262, 2022 (SCI-Expanded)
- XIV. **Oxamic acids: useful precursors of carbamoyl radicals**  
Ogbu I. M., Kurtay G., Robert F., Landais Y.  
Chemical Communications, vol.58, 2022 (SCI-Expanded)
- XV. **Improving the Photocatalytic Hydrogen Generation Using Nonaggregated Zinc Phthalocyanines**  
Genc Acar E., Yüzer A. C., Kurtay G., Yanalak G., Harputlu E., Aslan E., Ocakoglu K., GÜLLÜ M., Ince M., Patir I. H.  
ACS Applied Energy Materials, vol.4, no.9, pp.10222-10233, 2021 (SCI-Expanded)
- XVI. **Imidazole substituted Zinc(ii) phthalocyanines for co-catalyst-free photoelectrochemical and photocatalytic hydrogen evolution: influence of the anchoring group**  
Yüzer A. C., Genc E., Kurtay G., Yanalak G., Aslan E., Harputlu E., Ocakoglu K., Hatay Patir I., Ince M.  
Chemical Communications, vol.57, no.73, pp.9196-9199, 2021 (SCI-Expanded)
- XVII. **Molecular engineering of thienothiophene or dithienopyrrole-based  $\pi$ -spacers for dye-sensitized solar cells (DSSCs) with D- $\pi$ -A architecture: A DFT/TD-DFT study**  
Sarıkavak K., Kurtay G., Sevin F., GÜLLÜ M.  
Computational and Theoretical Chemistry, vol.1201, 2021 (SCI-Expanded)
- XVIII. **Solution-processed small-molecule organic solar cells based on non-aggregated zinc phthalocyanine derivatives: A comparative experimental and theoretical study**  
Yüzer A. C., Kurtay G., Ince T., Yurtdaş S., Harputlu E., Ocakoglu K., GÜLLÜ M., Tozlu C., Ince M.  
Materials Science in Semiconductor Processing, vol.129, 2021 (SCI-Expanded)
- XIX. **Synthesis and electrochemical characterization of a new benzodioxocine-fused poly(N-methylpyrrole) derivative: a joint experimental and DFT study**  
KURTAY G., Soganci T., Sarıkavak K., AK M., GÜLLÜ M.  
NEW JOURNAL OF CHEMISTRY, vol.44, no.43, pp.18929-18941, 2020 (SCI-Expanded)
- XX. **Urethanes synthesis from oxamic acids under electrochemical conditions**  
Ogbu I. M., Lusseau J., Kurtay G., Robert F., Landais Y.  
Chemical Communications, vol.56, no.81, pp.12226-12229, 2020 (SCI-Expanded)
- XXI. **Combined DFT-experimental investigation and preparation of two new Thiadiazole-based Bithiophene or Fluorene containing polymers via Suzuki-Miyaura reactions**  
Kaya E., Kurtay G., Korkmaz A.  
Journal of Polymer Research, vol.27, no.5, 2020 (SCI-Expanded)
- XXII. **Ultrasound-assisted rapid synthesis of 2-aminopyrimidine and barbituric acid derivatives**  
BAYRAMOĞLU D., Kurtay G., GÜLLÜ M.  
Synthetic Communications, vol.50, no.5, pp.649-658, 2020 (SCI-Expanded)
- XXIII. **Comparative cation sensing properties of a newly designed urea linked ferrocene-benzimidazole dyad: a DFT study**  
Sarıkavak K., Kurtay G., Sevin F.  
JOURNAL OF MOLECULAR MODELING, vol.26, 2020 (SCI-Expanded)
- XXIV. **Aryl Radical-Mediated Alkenylation of Alkyl Halides**  
Chaambi A., Kurtay G., Abderrahim R., Robert F., Landais Y.  
Helvetica Chimica Acta, vol.102, no.8, 2019 (SCI-Expanded)
- XXV. **Combined experimental and theoretical study of the novel ferrocene derivatives and examining the effect of E-Z stereoisomerism on their optical properties**

- Aslan H., Kurtay G., Korkmaz A., Çetin A., Öktemer A.  
Optical Materials, vol.89, pp.452-459, 2019 (SCI-Expanded)
- XXVI. **Eosin-Mediated Alkylsulfonyl Cyanation of Olefins**  
Pirenne V., Kurtay G., Voci S., Bouffier L., Sojic N., Robert F., Bassani D. M., Landais Y.  
Organic Letters, vol.20, no.15, pp.4521-4525, 2018 (SCI-Expanded)
- XXVII. **Experimental and theoretical investigation of new furan and thiophene derivatives containing oxazole, isoxazole, or isothiazole subunits**  
ÜNAL CİVCİR P., Kurtay G., Sarıkavak K.  
Structural Chemistry, vol.28, no.3, pp.773-790, 2017 (SCI-Expanded)
- XXVIII. **Synthesis and computational bandgap engineering of New 3,4-Alkylenedioxyppyrrrole (ADOP) derivatives and investigation of their electrochromic properties**  
Kurtay G., Soganci T., Ak M., GÜLLÜ M.  
Journal of the Electrochemical Society, vol.163, no.10, 2016 (SCI-Expanded)
- XXIX. **Preparation of an EDOT-based polymer: Optoelectronic properties and electrochromic device application**  
Soganci T., Kurtay G., Ak M., GÜLLÜ M.  
RSC Advances, vol.5, no.4, pp.2630-2639, 2015 (SCI-Expanded)
- XXX. **Synthesis and electropolymerization of 3,4-substituted quinoxaline functionalized pyrrole monomer and optoelectronic properties of its polymer**  
Kurtay G., Ak M., GÜLLÜ M., TOPPARE L. K., Ak M. S.  
Synthetic Metals, vol.194, pp.19-28, 2014 (SCI-Expanded)
- XXXI. **Synthesis and electropolymerization of 1,2-bis(thiophen-3-ylmethoxy)benzene and its electrochromic properties and electrochromic device application**  
Ak M., Ak M. S., Kurtay G., GÜLLÜ M., TOPPARE L. K.  
Solid State Sciences, vol.12, no.7, pp.1199-1204, 2010 (SCI-Expanded)

## Articles Published in Other Journals

- I. **AN IN SILICO PHARMACOKINETIC INVESTIGATION OF ORGANIC LUMINOGENS: UNDERSTANDING THE NIR AIEGENS AND THEIR INTERACTIONS WITH SERUM ALBUMINS**  
Naçakan H., Kurtay G., Özdil D. T., Yılmaz Z.  
ANKARA UNIVERSİTESİ ECZACILIK FAKULTESİ DERGİSİ, vol.48, no.1, pp.1-19, 2023 (Scopus)
- II. **Bridging Molecular Docking to Molecular Dynamics to Enlighten Recognition Processes of Tailored D-A/D-A-D Types' AIEgens with HSA/BSA**  
Naçakan H., Kurtay G.  
Journal of advanced research in natural and applied sciences (Online), vol.9, no.3, pp.1-10, 2023 (Peer-Reviewed Journal)
- III. **PIDA-mediated Oxidative Decarboxylation of Oxamic Acids. The Role of Radical Acidity Enhancement.**  
Ogbu I. M., Kurtay G., Badufle M., Robert F., López C. S., Landais Y.  
CHEMISTRY - A EUROPEAN JOURNAL, vol.29, no.0, pp.1-7, 2023 (Scopus)
- IV. **Green Synthesis of Silver Nanoparticles from Phaseolus vulgaris L. Extracts and Investigation of their Antifungal Activities**  
EDİZ E., KURTAY G., KARACA B., BÜYÜK İ., GÖKDEMİR Ş. F., ARAS E. S.  
Hacettepe Journal of Biology and Chemistry, vol.49, no.1, pp.11-23, 2021 (Peer-Reviewed Journal)

## Books & Book Chapters

- I. **ORGANİK KİMYA İKİNCİ BİR DİL ( BİRİNCİ DÖNEM KONULARI )**  
BAYRAMOĞLU D., EROĞLU F., KURTAY G., YAKUT M., KALKAN M.

Palme Yayınevi, Ankara, 2022

**II. Chapter 15: Multifunctional therapeutic hybrid nanocarriers for targeted and triggered drug delivery: recent trends and future prospects**

KURTAY G., YILMAZ M., KURALAY F., DEMİREL G.

in: Nanostructures for Drug Delivery, Ecaterina Andronescu and Alexandru Mihai Grumezescu, Editor, Elsevier, pp.461-493, 2017

**Refereed Congress / Symposium Publications in Proceedings**

- I. **NMR-QSAR Model of Some Imidazole Derivatives**  
ÜNAL CİVCİR P., KURTAY G., CİVCİR İ.  
The 3rd International Turkish Congress on Molecular Spectroscopy, Bodrum/Muğla, Turkey, 26 - 29 August 2017
- II. **Spectroscopic Study of Furan and Benzofuran Derivatives Combined with DFT Calculations**  
Karadeniz C., Uludağ K., KURTAY G., ÜNAL CİVCİR P.  
The 3rd International Turkish Congress on Molecular Spectroscopy, Bodrum/Muğla, Turkey, 26 - 29 August 2017
- III. **Optoelectronic Properties of Donor-Acceptor Type Conjugated Polymers**  
Uludağ K., Karadeniz C., Ortakçı T., KURTAY G., ÜNAL CİVCİR P.  
The 3rd International Turkish Congress on Molecular Spectroscopy, Bodrum/Muğla, Turkey, 26 - 29 August 2017
- IV. **Experimental and Theoretical Insights into New Furan and Thiophene Derivatives Containing Oxazole Isoxazole or Isothiazole Subunits as Potent Biologically Active Moieties**  
ÜNAL CİVCİR P., KURTAY G.  
4th International Bau Drug Design Congress, İstanbul, Turkey, 13 - 15 October 2016
- V. **Facile Synthesis and Comprehensive DFT Studies on Novel Benzimidazole Pyrazole and Quinazoline Derivatives as Potent Biological Active Agents**  
KURTAY G., ÜNAL CİVCİR P.  
4th International BAU Drug Design Congress, İstanbul, Turkey, 13 - 15 October 2016
- VI. **Benzodioksan ksilen sistemlerini içeren n alkil 3 4 dioksopirol ADOP türevi monomerlerin sentezi ve elektrokimyasal özelliklerinin incelenmesi**  
KURTAY G., TUĞBA S., AK M., GÜLLÜ M.  
27. Ulusal Kimya Kongresi, Turkey, 23 - 28 August 2015
- VII. **Ultrases destekli 2 aminopirimidin ve barbütirik asit türevlerinin tek kaptaki çok bileşenli sentezi**  
BAYRAMOĞLU D., KURTAY G., GÜLLÜ M.  
27. Ulusal Kimya Kongresi, Turkey, 23 - 28 August 2015
- VIII. **Biyolojik aktivite gösteren süstitü imidazol türevlerinin kuantum mekaniksel incelenmesi ve yapı aktivite ilişkilerinin belirlenmesi**  
ŞİMŞEK S., KURTAY G., ÜNAL CİVCİR P.  
27. Ulusal Kimya Kongresi, Turkey, 23 - 28 August 2015
- IX. **Computational Bandgap Engineering of Designed EDOT Derivatives and Investigation of Their Physicochemical Properties**  
ÜNAL CİVCİR P., KURTAY G., KÜBRA S.  
Molecular Chemistry, İstanbul, Turkey, 19 December 2014
- X. **Dienofil Üzerindeki I M ve I M Türü Süstitüentlerin Diels Alder Tepkimelerine Etkisinin DFT Yöntemiyle İrdelenmesi**  
KÜBRA S., KURTAY G., ÜNAL CİVCİR P.  
2. Ulusal Organik Kimya Kongresi, Turkey, 24 - 26 September 2014
- XI. **Potansiyel Biyoaktif İzoksazol Türevlerinin Sentezi ve Yapılarının DFT Yöntemi ile İncelenmesi**  
KÜBRA S., KURTAY G., ÜNAL CİVCİR P.  
2. Ulusal Organik Kimya Kongresi, Turkey, 24 - 26 September 2014
- XII. **Ksilen Halka Sistemi İçeren Piroil Türevi İletken Polimerlerin Sentezi ve Elektrokromik Davranışlarının Belirlenmesi**

- KURTAY G., SOĞANCI T., AK M., GÜLLÜ M.  
IV. Fiziksel Kimya Kongresi, Turkey, 5 - 08 June 2014
- XIII. **Diels Alder Reaksiyonlarının Yarı Denel HF ve DFT Yöntemleriyle Modellenmesi**  
KÜBRA S., KURTAY G., ÜNAL CİVCİR P.  
IV. Fiziksel Kimya Kongresi, Turkey, 5 - 08 June 2014
- XIV. **Yeni Oksazol Türevlerinin Sentezi ve Yapılarının Teorik Yöntemlerle İncelenmesi**  
KÜBRA S., KURTAY G., ÜNAL CİVCİR P.  
IV. Fiziksel Kimya Kongresi, Turkey, 7 - 09 June 2014
- XV. **3 4 Alkilendioksirol ADOP Türevi Monomerlerin Sentezi Polimerleştirilmesi ve Elektrokromik Özelliklerinin Belirlenmesi**  
KURTAY G., SOĞANCI T., AK M., GÜLLÜ M.  
IV. Fiziksel Kimya Kongresi, Turkey, 5 - 08 June 2014
- XVI. **Effects of Electron Donating and Electron Withdrawing Groups on Pyrrole Ring System A Detailed Hartree Fock and DFT Study**  
KURTAY G., ÜNAL CİVCİR P., GÜLLÜ M.  
IUPAC 44th World Chemistry Congress, 11 - 16 August 2013
- XVII. **Synthesis and Electropolymerization of Novel Quinoxaline Functionalized Pyrrole and Optoelectronic Properties of its Polymer**  
KURTAY G., AK M., AK M. S., TOPPARE L. K., GÜLLÜ M.  
IUPAC 44th World Chemistry Congress, İstanbul, Turkey, 11 - 16 August 2013
- XVIII. **Optoelectrochemical Properties of Poly 2 alkyl 5 10 dihydro 2H 2 5 benzodioxocino 3 4 c pyrrole**  
SULAK M., KURTAY G., AK M., GÜLLÜ M., TOPPARE L. K.  
The 11th International Chemistry Conference and Exhibition in Africa (11 ICCA), Luxor, Egypt, 20 - 23 November 2010
- XIX. **Structures and Electronic Properties of Some Oligomers Containing Pyrrole and Thiophene for Use in Advanced Technological Materials**  
ÜNAL CİVCİR P., KURTAY G., GÜLLÜ M.  
Chemical Physics Congress IX, 14 - 16 October 2010
- XX. **Modelling of Conductive Organic Polymers Containing Pyrrole and Thiophene**  
KURTAY G., ÜNAL CİVCİR P., GÜLLÜ M.  
Chemical Physics Congress IX, 14 - 16 October 2010
- XXI. **Synthesis and electropolymerization of 1 2 bis thiophen 3 yl methoxy benzene and its electrochromic properties**  
KURTAY G., SULAK M., AK M., GÜLLÜ M., TOPPARE L. K.  
8th International Electrochemistry Meeting in Turkey, 8 - 11 November 2009
- XXII. **1 2 Bis tiyofen 3 il metoksi benzenin sentezi ve polimer özelliklerinin incelenmesi**  
KURTAY G., SULAK M., AK M., GÜLLÜ M., TOPPARE L. K.  
XXI. Ulusal Kimya Kongresi, Turkey, 23 - 27 August 2007

## Activities in Scientific Journals

Eskişehir Technical University Journal of Science and and Technology A- Applied Sciences and Engineering, Assistant Editor/Section Editor, 2022 - Continues

Communications Faculty of Sciences University of Ankara Series B Chemistry and Chemical Engineering, Editor, 2020 - Continues

Journal of the Turkish Chemical Society, Section A: Chemistry, Foreign Language Redactor, 2017 - Continues

## Scholarships

TÜBİTAK 2219 - Yurt Dışı Doktora Sonrası Araştırma Burs Programı , TUBİTAK, 2021 - 2022

2211-A Genel Yurt İçi Doktora Burs Programı, TUBİTAK, 2007 - 2011

2228-A Son Sınıf Lisans Öğrencileri için Lisansüstü (Yüksek Lisans/Doktora) Burs Programı, TUBİTAK, 2006 - 2007