

# Prof. Arzu HATİPOĞLU

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## Education Information

Doctorate, Yildiz Technical University, Faculty Of Arts & Science, Kimya, Turkey 1991 - 1998

Postgraduate, Yildiz Technical University, Faculty Of Arts & Science, Kimya, Turkey 1989 - 1991

Undergraduate, Yildiz Technical University, Faculty Of Arts & Science, Department Of Chemistry, Turkey 1985 - 1989

## Research Areas

Chemistry, Physical Chemistry, Chemical Kinetics, Natural Sciences

## Academic Titles / Tasks

Professor, Yildiz Technical University, Faculty Of Arts & Science, Department Of Chemistry, 2023 - Continues

Associate Professor, Yildiz Technical University, Faculty Of Arts & Science, Department Of Chemistry, 2011 - 2023

Assistant Professor, Yildiz Technical University, Faculty Of Arts & Science, Department Of Chemistry, 2003 - 2011

Research Assistant PhD, Yildiz Technical University, Faculty Of Arts & Science, Department Of Chemistry, 1998 - 2003

Research Assistant, Yildiz Technical University, Faculty Of Arts & Science, Department Of Chemistry, 1991 - 1998

## Advising Theses

Hatipoğlu A., Beta Laktam Antibiyotiklerin Hidroksil Radikali ile Reaksiyon Mekanizması ve Kinetiğinin Kuantum Kimyasal Hesaplanması, Doctorate, Ş.AYDOĞDU(Student), 2024

Hatipoğlu A., Görünür ışık duyarlı yeni metal-katkılı TiO<sub>2</sub> fotokatalizörlerinin tasarımı ve elektronik yapılarının kuantum mekaniksel yöntemlerle incelenmesi, Doctorate, S.KIRCI(Student), 2022

HATİPOĞLU A., Sülfonamidlerin Kuantum Kimyasal Reaktivite İndislerinin DFT Yöntemiyle Hesaplanması, Postgraduate, Ş.AYDOĞDU(Student), 2017

HATİPOĞLU A., Halojen İçeren Organofosforlu Bileşiklerin Gaz Ve Sulu Fazda Toksisitelerinin DFT İndisleri İle Belirlenmesi, Postgraduate, D.Kavruk(Student), 2016

HATİPOĞLU A., Gaz ve Sulu Fazda Organofosforlu Pestisitlerin Kuantum Kimyasal Reaktivite İndislerinin DFT Yöntemiyle Hesaplanması, Postgraduate, H.Dedeoğlu(Student), 2013

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

- I. **Synthesis of a new Zn-phthalocyanine, photophysical, photochemical, and sono-photochemical properties and DFT studies**  
AYDOĞDU Ş., YAŞA ATMACA G., ERDOĞMUŞ A., HATİPOĞLU A.  
Polyhedron, vol.256, 2024 (SCI-Expanded)
- II. **Degradation kinetics and prediction of primary intermediates of cephalexin in aqueous media**  
AYDOĞDU Ş., HATİPOĞLU A.  
Structural Chemistry, 2024 (SCI-Expanded)
- III. **Aqueous degradation of 6-APA by hydroxyl radical: a theoretical study**  
AYDOĞDU Ş., HATİPOĞLU A.  
Journal of Molecular Modeling, vol.29, no.8, 2023 (SCI-Expanded)
- IV. **Theoretical insights into the reaction mechanism and kinetics of ampicillin degradation with hydroxyl radical**  
Aydoğdu Ş., Hatipoğlu A.  
JOURNAL OF MOLECULAR MODELING, no.29, pp.63-75, 2023 (SCI-Expanded)
- V. **The reaction mechanism investigation of sulfonamides with OH radical by DFT**  
AYDOĞDU Ş., HATİPOĞLU A.  
JOURNAL OF THE INDIAN CHEMICAL SOCIETY, vol.99, no.11, 2022 (SCI-Expanded)
- VI. **Metallophthalocyanines for PDT Applications: A DFT Study**  
AYDOĞDU Ş., HATİPOĞLU A., ERDOĞMUŞ A.  
JOURNAL OF COMPUTATIONAL BIOPHYSICS AND CHEMISTRY, vol.21, no.05, pp.599-609, 2022 (SCI-Expanded)
- VII. **Electronic Structures and Reactivities of COVID-19 Drugs: A DFT Study**  
AYDOĞDU Ş., HATİPOĞLU A.  
ACTA CHIMICA SLOVENICA, vol.69, no.3, pp.647-656, 2022 (SCI-Expanded)
- VIII. **Design of Aromatic Ring-Based Polyphosphonium Salts Synthesized via ROMP and the Investigation into Their Antibacterial and Hemolytic Activities**  
Kuday H., Süer N. B., Baylr A., Aksu M. B., Hatipoğlu A., Guncu M. M., Acaroglu Degitz I., Gallei M., Eren T.  
ACS Applied Polymer Materials, vol.3, pp.6524-6538, 2021 (SCI-Expanded)
- IX. **QUANTUM CHEMICAL STUDY FOR THE TOXICITY PREDICTION OF SULFONAMIDE ANTIBIOTICS WITH QUANTITATIVE STRUCTURE - ACTIVITY RELATIONSHIP**  
Aydogdu Ş., Hatipoglu A.  
LATIN AMERICAN APPLIED RESEARCH, vol.51, no.1, pp.7-13, 2021 (SCI-Expanded)
- X. **Photodegradation kinetics of organophosphorous with hydroxyl radicals: Experimental and theoretical study**  
AYDOĞDU Ş., HATİPOĞLU A., Eren B., YALÇIN GÜRKAN Y.  
JOURNAL OF THE SERBIAN CHEMICAL SOCIETY, vol.86, no.10, pp.955-969, 2021 (SCI-Expanded)
- XI. **Synthesis of D-pi-A type 4,5-diazafluorene ligands and Ru (II) complexes and theoretical approaches for dye-sensitive solar cell applications**  
ERDEN İ., HATİPOĞLU A., Cebeci C., AYDOĞDU Ş.  
JOURNAL OF MOLECULAR STRUCTURE, vol.1201, 2020 (SCI-Expanded)
- XII. **Theoretical investigation on the kinetics of dimethyl phosphoramidate with hydroxyl radicals**  
Aydoğdu Ş., Hatipoğlu A.  
JOURNAL OF THE INDIAN CHEMICAL SOCIETY, vol.96, pp.1117-1122, 2019 (SCI-Expanded)
- XIII. **Modeling the photochemical transformation of nitrobenzene under conditions relevant to sunlit surface waters: Reaction pathways and formation of intermediates**  
Vione D., De Laurentiis E., berto S., MINERO C., Hatipoglu A., CINAR Z.  
CHEMOSPHERE, vol.145, pp.277-283, 2016 (SCI-Expanded)
- XIV. **Photocatalytic degradation of cefazolin over N-doped TiO<sub>2</sub> under UV and sunlight irradiation: Prediction of the reaction paths via conceptual DFT**  
Gurkan Y. Y., TÜRKTEKİN Ü. N., HATİPOĞLU A., CINAR Z.  
CHEMICAL ENGINEERING JOURNAL, vol.184, pp.113-124, 2012 (SCI-Expanded)

- XV. **Decolorization of Naphthol Blue Black using the Horseradish Peroxidase**  
ÖNDER S., ÇELEBİ M., Altikatoglu M., HATİPOĞLU A., Kuzu H.  
APPLIED BIOCHEMISTRY AND BIOTECHNOLOGY, vol.163, no.3, pp.433-443, 2011 (SCI-Expanded)
- XVI. **Photo-oxidative degradation of toluene in aqueous media by hydroxyl radicals**  
HATİPOĞLU A., VİONE D., Yalçın Y., MINERO C., CINAR Z.  
JOURNAL OF PHOTOCHEMISTRY AND PHOTOBIOLOGY A-CHEMISTRY, vol.215, no.1, pp.59-68, 2010 (SCI-Expanded)
- XVII. **An experimental and theoretical investigation of the photocatalytic degradation of meta-cresol in TiO<sub>2</sub> suspensions: a model for the product distribution**  
HATİPOĞLU A., San N., CINAR Z. H.  
JOURNAL OF PHOTOCHEMISTRY AND PHOTOBIOLOGY A-CHEMISTRY, vol.165, pp.119-129, 2004 (SCI-Expanded)
- XVIII. **A QSAR Study on the Kinetics of the Reactions of Aliphatic Alcohols with the Photogenerated Hydroxyl Radicals**  
Hatipoğlu A., Cinar Z.  
Journal Of Molecular Structure-Theochem, vol.631, pp.189-207, 2003 (SCI-Expanded)
- XIX. **Photocatalytic degradation of 4-nitrophenol in aqueous TiO<sub>2</sub> suspensions: Theoretical prediction of the intermediates**  
San N., HATİPOĞLU A., KOCTURK g., CINAR Z. H.  
JOURNAL OF PHOTOCHEMISTRY AND PHOTOBIOLOGY A-CHEMISTRY, vol.146, no.3, pp.189-197, 2002 (SCI-Expanded)
- XX. **A study on the structures of the substituted (aminomethyl) lithium and (thiomethyl) lithium compounds**  
HATİPOĞLU A., SELÇUKİ C., AVİYENTE V., CINAR Z.  
JOURNAL OF MOLECULAR MODELING, vol.8, no.5, pp.156-167, 2002 (SCI-Expanded)
- XXI. **Prediction of primary intermediates and the photodegradation kinetics of 3-aminophenol in aqueous TiO<sub>2</sub> suspensions**  
San N., HATİPOĞLU A., KOCTURK g., CINAR Z. H.  
JOURNAL OF PHOTOCHEMISTRY AND PHOTOBIOLOGY A-CHEMISTRY, vol.139, pp.225-232, 2001 (SCI-Expanded)

## Articles Published in Other Journals

- I. **The reactivity properties of platinum-containing anticancer drugs**  
AYDOĞDU Ş., Evirgen M., HATİPOĞLU A.  
Bulgarian Chemical Communications, vol.55, no.3, pp.227-233, 2023 (Scopus)
- II. **Toxicity prediction of organophosphorus compounds by QSAR**  
Hatipoğlu A., Aydoğdu Ş., Dedeoğlu H., Civan D.  
Bulgarian Chemical Communications, vol.51, no.3, pp.445-451, 2019 (Scopus)
- III. **Effect of Molecular Properties on the Photocatalytic Degradation Rates of Dichlorophenols and Dichloroanilines in Aqueous TiO<sub>2</sub> Suspensions**  
SAN N., HATİPOĞLU A., CINAR Z.  
TOXICOLOGICAL AND ENVIRONMENTAL CHEMISTRY, pp.147-162, 2004 (Scopus)
- IV. **A Computational Study of Linear Polyenes and Their Halogenated Derivatives**  
Çinar Z., HATİPOĞLU a., SAN N., baş t., aviyente v.  
Chimica Acta Turcica, vol.26, pp.63-68, 1998 (Peer-Reviewed Journal)

## Refereed Congress / Symposium Publications in Proceedings

- I. **Sülfonamid Grubu Antibiyotikler İçin Kimyasal Reaktivite İndisleri**  
Aydoğdu Ş., Hatipoğlu A.

31. Ulusal Kimya Kongresi, İstanbul, Turkey, 10 - 13 September 2019, pp.123

- II. **Vanilin Türevli 4,5-Diazafluoren Bileşiklerinin Sentezi, DFT Çalışmaları Ve Boya Duyarlı Güneş Hücresi Üretimi**  
Cebeci C., Erden İ., Hatipoğlu A., Aydoğdu Ş.  
VII. Ulusal Anorganik Kimya Kongresi, Hitit Ün.Çorum, Çorum, Turkey, 19 - 22 June 2019, pp.1
- III. **A Theoretical Study Of The Reaction Of Dimethyl Phosphoramidate With Hydroxyl Radicals**  
Aydoğdu Ş., Hatipoğlu A.  
5th International Conference on New Trends in Chemistry, Athens, Greece, 22 - 24 April 2019, pp.49
- IV. **Electronic Properties of Penicillin Derivatives**  
AYDOĞDU Ş., Yaşar N. İ., Süleymanoğlu B., HATİPOĞLU A.  
The 12th Chemical Physics Congress, Karabük, Turkey, 12 October 2018, pp.36
- V. **Degradation Reaction of Sulfisoxazole in Aqueous Medium by Hydroxyl Radical**  
Aydoğdu Ş., Hatipoğlu A.  
The 12th Chemical Physics Congress, Karabük, Turkey, 12 - 13 October 2018, pp.22
- VI. **Reactivity Descriptors for the Prediction of the Degradation reactions of Sulfonamides**  
AYDOĞDU Ş., HATİPOĞLU A.  
International Symposium on Chemistry via Computation Applications on Molecular Nanoscience, İstanbul, Turkey, 30 October 2017, pp.36
- VII. **Sülfonamidlerin Toksisitelerinin Belirlenmesinde Yapı Aktivite İlişkileri**  
AYDOĞDU Ş., HATİPOĞLU A.  
3.Hesaplamalı Kimya Kongresi, Ankara, Turkey, 12 October 2017, pp.26
- VIII. **Electronic Structures of the Halogenated Organophosphorous Compounds: A DFT Study**  
HATİPOĞLU A., Civan D.  
11th European Conference on Theoretical and Computational Chemistry, Barselona, Spain, 04 September 2017, pp.127
- IX. **Quantum Chemical Descriptors of the Sulfonamides by DFT**  
AYDOĞDU Ş., HATİPOĞLU A.  
11th European Conference on Theoretical and Computational Chemistry, Barselona, Spain, 04 September 2017, pp.104
- X. **Electronic Properties of the Some Sulfonamides by Quantum Chemical Methods**  
AYDOĞDU Ş., HATİPOĞLU A.  
4th International BAU Drug Design Congress, İstanbul, Turkey, 13 October 2016
- XI. **A Qsar Study on the Toxicity of Halogenated Organophosphorous Compounds**  
HATİPOĞLU A., Civan D.  
16th European Meeting on Environmental Chemistry, Torino, Italy, 30 November 2015, pp.146
- XII. **Organofosforlu Pestisitlerin Elektronik Özelliklerinin Gaz ve Sulu Fazda DFT Yöntemiyle Hesaplanması**  
Hatipoğlu A., Dedeoğlu H., Aydoğdu Ş., Çınar Z.  
5.Fiziksel Kimya Kongresi, Konya, Turkey, 16 - 19 May 2015, pp.214
- XIII. **Qsar's For The Degradation Reactions Of Organophosphorous Compounds By DFT**  
Hatipoğlu A., Dedeoğlu H., Çınar Z. H.  
International Symposium on Molecular Chemistry(MOLCHEM2014), İstanbul, Turkey, 18 - 19 December 2014, pp.107
- XIV. **Prediction of the Toxicity of Organophosphorus Compounds Using Quantum Chemical Descriptors**  
Hatipoğlu A., Dedeoğlu H., Çınar Z. H.  
XI. Chemical Physics Congress, İstanbul, Turkey, 17 - 18 October 2014, pp.54
- XV. **Reactivity Descriptors For The Degradation Reactions Of Organophosphorous Compounds**  
HATİPOĞLU A., Dedeoğlu H., Çınar Z.  
9th European Conference on Computational Chemistry (EUCCO-9), Sopron, Hungary, 01 September 2013, pp.1
- XVI. **Photocatalytic Degradation of Cefazolin: A Combined Experimental and Computational Approach to the Determination of Reaction Pathways**

## Supported Projects

- HATİPOĞLU A., AYDOĞDU Ş., Project Supported by Other Official Institutions, İleri Oksidasyon Teknikleri ile Organofosfatların Fotokatalitik Degradasyon Kinetiğinin Deneysel ve Teorik Olarak İncelenmesi, 2018 - Continues
- EREN T., KUDAY H., Süer N. C., HATİPOĞLU A., Project Supported by Higher Education Institutions, Fosfonyum tuzlarını içeren biyosidal polimerlerin sentezi ve uygulaması, 2021 - 2021
- HATİPOĞLU A., Project Supported by Higher Education Institutions, Organik Fosforlu Pestisitlerin OH Radikali İle Reaksiyonlarının Kinetiğinin Kuantum Mekaniksel İncelenmesi, 2012 - 2017
- Hatipoğlu A., Çınar Z. H., Project Supported by Higher Education Institutions, Yeni TiO<sub>2</sub> Nano Fotokatalizörlerin Tasarımı Sentezi ve Karakterizasyonu, 2009 - 2014
- Hatipoğlu A., Altıkatoğlu Yapaöz M., Project Supported by Higher Education Institutions, Horseradish Peroksidaz(HRP) ve Türevleri Kullanılarak Çevre Kirlenici Boyaların Giderilmesi, 2010 - 2012
- HATİPOĞLU A., Project Supported by Higher Education Institutions, Bis (fenilimin) schiff bazı ligandlarının ve metal komplekslerinin biyolojik aktiviteleri için yeni bir teorik modelin geliştirilmesi, 2007 - 2011
- Hatipoğlu A., Çınar Z., Project Supported by Higher Education Institutions, Glikol ve Amino Alkollerin OH Radikalleri ile Reaksiyonlarının Kinetiğinin Teorik Olarak İncelenmesi, 2004 - 2010
- Hatipoğlu A., Çınar Z., Project Supported by Higher Education Institutions, Aromatik Kirlenicilerin Fotokatalitik Degradasyon Kinetiğinin Deneysel ve Teorik Olarak İncelenmesi, 2000 - 2003
- Hatipoğlu A., Çınar Z. H., Project Supported by Higher Education Institutions, DNA Molekülünün OH Radikalleri Tarafından Parçalanma Kinetiğinin İncelenmesi, 1994 - 1999

## Scientific Refereeing

- turkish computational and theoretical chemistry, National Scientific Refreed Journal, October 2018
- turkish journal of chemistry, National Scientific Refreed Journal, June 2018

## Metrics

- Publication: 63
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