

# Assoc. Prof. MELEK TERCAN YAVAŞOĞLU



## Personal Information

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**Address:** Çanakkale Onsekiz Mart Üniversitesi Fen-Edebiyat Fakültesi Kimya Bölümü Ofis No:222 17020 Çanakkale

## Education Information

2012 - 2018	Doctorate, Canakkale Onsekiz Mart University, Lisansüstü Eğitim Enstitüsü, Kimya, Turkey
2009 - 2012	Postgraduate, Canakkale Onsekiz Mart University, Lisansüstü Eğitim Enstitüsü, Kimya, Turkey
2002 - 2008	Undergraduate, Hacettepe University, Fen Fakültesi, Kimya Bölümü, Turkey

## Dissertations

2018	İki- ve Üç-dişli Benzimidazol Ligandlar İçeren Yeni Rutenyum Komplekslerin Sentez ve Karakterizasyonları: DSSC'ler için Yeni Boyalar, Canakkale Onsekiz Mart University, Lisansüstü Eğitim Enstitüsü, Kimya, Doctorate
2012	Bazı Şifalı Bitkilerin Ekonomiye Kazandırılması: Tere ( <i>Lepidium Sativum</i> L.) Bitkisinin Antioksidan, Sitotoksik, Enzim-Aktif Özüt ve Bileşenlerinin Belirlenmesi , Canakkale Onsekiz Mart University, Lisansüstü Eğitim Enstitüsü, Kimya, Postgraduate

## Research Areas

Chemistry, Inorganic Chemistry, Organometallic Chemistry, Catalysis, Natural Sciences

## Academic Titles / Tasks

2024 - Continues	Assistant Professor, Canakkale Onsekiz Mart University, Fen Fakültesi, Kimya
2018 - 2024	Research Assistant PhD, Canakkale Onsekiz Mart University, Fen Fakültesi, Kimya
2009 - 2018	Research Assistant, Canakkale Onsekiz Mart University, Fen Fakültesi, Kimya

## Courses

2020 - 2021	Anorganik Kimya Laboratuvarı-II, Undergraduate
2020 - 2021	Anorganik Kimya Labortauvarı-I , Undergraduate
2020 - 2021	Genel Kimya, Undergraduate
2019 - 2020	Genel Kimya Laboratuvarı (Biyoloji Bölümü), Undergraduate

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

- Utilization of superabsorbent xanthan films cross-linked with Ru0 nanoparticles for hydrogen generation from ammonia borane  
Özay H., Tercan Yavaşoğlu M., Özay Ö.

INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.61, pp.367-376, 2024 (SCI-Expanded)

- II. **Investigation of the catalytic activity of Ag(0) nanoparticles supported into anionic hydrogel networks for hydrogen production process**  
Tercan M., ÖZAY H., ÖZAY Ö.  
Inorganic and Nano-Metal Chemistry, 2024 (SCI-Expanded)
- III. **Rapid preparation of Ru(0) nanoparticles stabilized with water-soluble biopolymer for hydrogen production from ammonia borane: Development of battery-like hydrolysis media**  
Seref E., Tercan M., Özay H., Ilgin P., Özay Ö.  
International Journal of Hydrogen Energy, vol.48, no.78, pp.30420-30434, 2023 (SCI-Expanded)
- IV. **Magnetically isolable Pd(0) nanoparticles supported on surface functionalized Fe<sub>3</sub>O<sub>4</sub> for hydrogen generation via ammonia borane hydrolysis**  
Tercan M.  
ChemistrySelect, vol.8, no.31, 2023 (SCI-Expanded)
- V. **Simultaneous reduction of 4-nitrophenol, 4-nitroaniline and methylene blue organic pollutants via TiO<sub>2</sub> supported Pd(II) complex catalyst bearing 2-(6-methylpyridin-2-yl)-1H-benzimidazole type ligand**  
Tercan M., Dayan O., Özdemir N.  
POLYHEDRON, vol.232, pp.116297-116309, 2023 (SCI-Expanded)
- VI. **Highly effective palladium nanocatalyst supported in polymeric networks for the catalytic hydrogen generation from borane-morpholine complex**  
Özay H., Tercan M., Özay Ö., Ilgin P.  
ChemistrySelect, vol.7, no.45, 2022 (SCI-Expanded)
- VII. **Dye sensitized solar cell-based optoelectronic device using novel [Ru(L1)(L2)(NCS)<sub>2</sub>] complex**  
Dayan O., İmer A. G., Tercan Yavaşoğlu M., Dere A., Al-Sehemi A. G., Al-Ghamdi A. A., Yakuphanoglu F.  
JOURNAL OF MOLECULAR STRUCTURE, vol.1238, pp.1-9, 2021 (SCI-Expanded)
- VIII. **Catalytic and biological activities of homoleptic palladium(II) complexes bearing the 2-aminobenzothiazole moiety**  
DAYAN S., TERCAN YAVAŞOĞLU M., ÖZDEMİR F. A., AYKUTOĞLU G., ÖZDEMİR N., ŞERBETÇİ Z., DİNÇER M., DAYAN O.  
POLYHEDRON, vol.199, 2021 (SCI-Expanded)
- IX. **The preparation of new palladium (II) complexes with Schiff base type ligands and its impregnated Al<sub>2</sub>O<sub>3</sub> materials: As the catalysts for degradation/reduction of organic dyes**  
Selvi G., Tercan M., Özdemir N., DAYAN O.  
Applied Organometallic Chemistry, vol.34, no.12, 2020 (SCI-Expanded)
- X. **P(2-VP) supported Ru(II) material as catalyst for H<sub>2</sub> production from the methanolysis of NaBH<sub>4</sub>**  
TERCAN YAVAŞOĞLU M., Karacan Yeldir E., DAYAN O., ORAL A.  
INORGANIC AND NANO-METAL CHEMISTRY, vol.50, no.12, pp.1343-1352, 2020 (SCI-Expanded)
- XI. **Investigation of the effect of alkyl substitution on DSSC efficiency of Ru(II) complexes bearing tridentate benzimidazole ligands**  
TERCAN YAVAŞOĞLU M., DAYAN O.  
INORGANIC AND NANO-METAL CHEMISTRY, vol.50, no.7, pp.545-554, 2020 (SCI-Expanded)
- XII. **Simultaneous degradation and reduction of multiple organic compounds by poly(vinyl imidazole) cryogel-templated Co, Ni, and Cu metal nanoparticles**  
TERCAN YAVAŞOĞLU M., Demirci S., DAYAN O., ŞAHİNER N.  
NEW JOURNAL OF CHEMISTRY, vol.44, no.11, pp.4417-4425, 2020 (SCI-Expanded)
- XIII. **Synthesis, DFT computations and antimicrobial activity of a Schiff base derived from 2-hydroxynaphthaldehyde: remarkable solvent effect**  
TERCAN M., Özdemir N., Özdemir F. A., Şerbetçi Z., ERDENER ÇIRALI D., Çetinkaya B., DAYAN O.  
JOURNAL OF MOLECULAR STRUCTURE, vol.1, no.1, pp.1-11, 2020 (SCI-Expanded)
- XIV. **Synthesis and DSSC Applications of Ru(II) Complexes Bearing Benzimidazole Type Ligands**  
TERCAN YAVAŞOĞLU M., DAYAN O.

JOURNAL OF ELECTRONIC MATERIALS, vol.48, no.1, pp.642-648, 2019 (SCI-Expanded)

XV. **Synthesis and photovoltaic properties of new Ru(II) complexes for dye-sensitized solar cells**

DAYAN O., Özdemir N., Yakuphanoglu F., Şerbetci Z., BİLİCİ A., Çetinkaya B., TERCAN M.

JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.29, no.13, pp.11045-11058, 2018 (SCI-Expanded)

XVI. **Syntheses and molecular structures of novel Ru(II) complexes with bidentate benzimidazole based ligands and their catalytic efficiency for oxidation of benzyl alcohol**

DAYAN O., Tercan M., Özdemir N.

JOURNAL OF MOLECULAR STRUCTURE, vol.1123, pp.35-43, 2016 (SCI-Expanded)

XVII. **Synthesis and characterization of 2,2'-(pyridine-2,6-diyl)bis (1H-benzo[d]imidazol-3-ium) 2,4,6-trimethylbenzenesulfonate chloride by experimental and theoretical methods**

Ozdemir N., DAYAN O., Yavasoglu M., Cetinkaya B.

SPECTROCHIMICA ACTA PART A-MOLECULAR AND BIOMOLECULAR SPECTROSCOPY, vol.131, pp.145-152, 2014 (SCI-Expanded)

## Articles Published in Other Journals

I. **Catalytic Use of Pd(II) Complex Bearing 2-(thiophen-2-yl)-1H-Benzimidazole Ligand for The Reduction / Degradation of Multiple Mixtures Containing 4-NP, RhB and MB Organic Pollutants**

Tercan Yavaşoğlu M.

Yüzüncü Yıl Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.1, no.28, pp.271-284, 2023 (Peer-Reviewed Journal)

II. **"The Novel Ru(II) Complexes for Dye-Sensitized Solar Cells"**

Dayan O., Hızır S., Alagöz C., Tercan Yavaşoğlu M.

Journal of Materials and Electronic Devices, vol.1, no.1, pp.34-36, 2019 (Peer-Reviewed Journal)

III. **The I-V Characteristics of a New Ru(II) Complex for Different Devices**

Dayan O., Şerbetçi Z., Yakuphanoglu F., Özdemir N., Dere A., Tercan Yavaşoğlu M.

Journal of Materials and Electronic Devices, vol.2018, no.1, pp.25-29, 2018 (Peer-Reviewed Journal)

## Refereed Congress / Symposium Publications in Proceedings

I. **H<sub>2</sub> production via NH<sub>3</sub>BH<sub>3</sub> hydrolysis catalyzed by pyridinedicarboxylic acid derivative macrocyclic tetraamide stabilized Pd NPs (Oral Presentation)**

TERCAN YAVAŞOĞLU M.

1st International Conference on Modern and Advanced Research ICMAR 2023, Konya, Turkey, 29 - 31 July 2023, pp.85

II. **PD(II) COMPLEX BEARING 4,4'-METHYLENEBIS(2,6-DIETHYLANILINE) DERIVATIVE BI-DENTATE SCHIFF BASE LIGAND AS CATALYST FOR HYDROGEN PRODUCTION (Oral Presentation)**

TERCAN YAVAŞOĞLU M.

International Marmara Sciences Congress (Imascon Spring 2023), Kocaeli, Turkey, 9 - 10 June 2023, pp.64

III. **Desteklenmiş Metal Nanoparçacıkların Amin Boran Bileşiklerinin Hidrolizi ile Hidrojen Üretiminde Katalizör Olarak Kullanımı (Sözlü Sunum, SS032)**

Tercan Yavaşoğlu M., Özay H., Özay Ö.

34. Ulusal Kimya Kongresi, Yalova, Turkey, 1 - 06 September 2022, pp.73

IV. **Polimerik Ağ Yapılarda Hazırlanmış Pd(0) Nanopartiküllerinin Organo-Amin Boranların Hidroliz Reaksiyonundaki Katalitik Özelliklerinin İncelenmesi (Poster, PS075)**

Özay H., Tercan Yavaşoğlu M., Özay Ö., Ilgın P.

34. Ulusal Kimya Kongresi, Yalova, Turkey, 1 - 06 September 2022, pp.293

V. **Biyopolimer ile Kapsüllenmiş Metalik Nanopartiküllerin Sentezi ve Hidroliz Reaksiyonlarında Katalizör Olarak Kullanımı (Poster, PS074)**

Özay Ö., Şeref E., Tercan Yavaşoğlu M., Özay H., İlgin P.

34. Ulusal Kimya Kongresi, Yalova, Turkey, 1 - 06 September 2022, pp.291

- VI. **Ru(II) Fotoduyarlaştırıcıların DSSC Etkinlikleri**  
Tercan Yavaşoğlu M.  
Trakya Üniversiteler Birliği Enerji Sempozyumu, Çanakkale, Turkey, 27 November 2019
- VII. **Photo Diode-Specific Ruthenium(II) Complex (Poster)**  
Tercan Yavaşoğlu M., Dere A., Şerbetçi Z., Dayan O., Yakuphanoglu F.  
6th International Conference on Material Science and Nanotechnology, Aksaray, Turkey, 16 - 18 October 2019, pp.224
- VIII. **Diode Application of Organometallic Ruthenium Complex with Different Ligand Structures (Poster Presentation)**  
Tercan Yavaşoğlu M., Dere A., Şerbetçi Z., Dayan O., Yakuphanoglu F.  
6th International Conference on Material Science and Nanotechnology, Aksaray, Turkey, 16 - 18 October 2019, pp.223
- IX. **TRI-DENTATE BENZIMIDAZOLE TYPE LIGANDS BEARING RU(II) COMPLEXES AS DSSC PHOTSENSITIZERS (Oral Presentation)**  
TERCAN M., DAYAN O.  
3 rd International Conference on Organic Electronic Material Technologies (OEMT2018), Edirne, Turkey, 20 - 22 September 2018, pp.79
- X. **Synthesis and DSSC Applications of New Ru Complexes Bearing Benzimidazole Type Ligands (Oral Presentation)**  
Tercan Yavaşoğlu M., Dayan O.  
INTERNATIONAL CONGRESS ON CHEMISTRY AND MATERIALS SCIENCE, Ankara, Turkey, 5 - 07 October 2017, pp.37
- XI. **Preparation of a Cobalt Based New Material for Hydrogenation of 2nitroaniline**  
DAYAN O., YATKIN S., TERCAN YAVAŞOĞLU M.  
NANOSCIENCE&NANOTECHNOLOGY FOR NEXT GENERATION INTERNATIONAL CONFERENCE 2016, Antalya, Turkey, 20 - 22 October 2016, pp.77-83
- XII. **Synthesis and Characterization of a New Metal-Organic Hybrid Material**  
YATKIN S., DAYAN O., TERCAN YAVAŞOĞLU M.  
2 nd International Conference on Organic Electronic Material Technologies, Çanakkale, Turkey, 17 - 19 May 2016, pp.164
- XIII. **Synthesis and DSSC applications of Ru complexes bearing benzimidazole type ligands (Oral Presentation)**  
Tercan Yavaşoğlu M., Dayan O.  
2 nd International Conference on Organic Electronic Material Technologies, Çanakkale, Turkey, 17 - 19 May 2016, pp.39
- XIV. **Synthesis and Catalytic Activity Studies of Ru Complexes Bearing 2-(1H-Benzimidazol-2-yl)quinoline Derivatives**  
Tercan M., Dayan O., Özdemir N.  
1st International Turkic World Conference on Chemical Sciences and Technologies, Sarajevo, Bosnia And Herzegovina, 27 October - 01 November 2015, pp.256
- XV. **NITROREDUCTASE BASED PRO-DRUG ACTIVATION**  
Aşçı Yetiş G., Çelik A., Ay M., Güngör T., Cömert Önder F., Tercan Yavaşoğlu M., Kurt M.  
44th IUPAC World Chemistry Congress, İstanbul, Turkey, 11 - 16 August 2013, pp.1280
- XVI. **A NOVEL Ssap-NtrB/PRO-DRUG COMBINATION FOR CANCER THERAPY**  
Ay M., Aşçı Yetiş G., Çelik A., Güngör T., Cömert Önder F., Tercan Yavaşoğlu M., Kurt M.  
44th IUPAC World Chemistry Congress, İstanbul, Turkey, 11 - 16 August 2013, pp.2956
- XVII. **2,6-Bis(benzimidazol-2-il)piridinyum Monokloro Mono(Aril)Sulfonatların Sentezi, Karakterizasyonu**  
DAYAN O., TERCAN YAVAŞOĞLU M., ÖZDEMİR N., ÇETİNKAYA B.  
IV. Ulusal Anorganik Kimya Kongresi, Tokat, Turkey, 30 May - 02 June 2013, pp.120

- XVIII. **Kanser Terapilerinde Kullanılmak Üzere Ssap-NTRB/ilaç-öncü (Prodrug) Bileşik Birleşimlerinin Araştırılması**  
Aşçı Yetiş G., Çelik A., Ay M., Güngör T., Cömert Önder F., Tercan Yavaşoğlu M.  
1. İlaç Kimyası, Üretimi, Teknolojisi, Standardizasyonu Kongresi, Antalya, Turkey, 29 - 31 March 2013, pp.279
- XIX. **'Tere (Lepidium sativum L.) Bitkisi Özütlerinin Antioksidan Kapasitelerinin ve Enzim İnhibisyon Etkilerinin Belirlenmesi'**  
AY M., TERCAN YAVAŞOĞLU M.  
26. Ulusal Kimya Kongresi, Muğla, Turkey, 1 - 06 October 2012, pp.78-79
- XX. **Synthesis of Some Prodrug Candidates For Nitroreductase Based Cancer Therapy**  
AY M., Çelik A., CÖMERT ÖNDER F., TERCAN YAVAŞOĞLU M., YETİS G.  
10th International Symposium on Pharmaceutical Sciences, Ankara, Turkey, 26 - 29 June 2012, pp.135
- XXI. **Investigation Of Antioxidant Components From Lepidium Sativum L. (Tere) Extracts,**  
Ay M., D. Sarker S., Tercan Yavaşoğlu M.  
1st International Symposium On Secondary Metabolites Chemical, Biological and Biotechnological Properties, Denizli, Turkey, 12 - 15 September 2011, pp.53

## Supported Projects

2022 - Continues	Manyetik Nanokompozit Malzeme Destekli Pd Nanoparçacıkların (Fe <sub>3</sub> O <sub>4</sub> /SiO <sub>2</sub> -NH <sub>2</sub> @Pd NPs) Amonyak Boranların Hidrolizi ile Hidrojen Üretiminde Katalizör Olarak Kullanımı, Project Supported by Higher Education Institutions
2024 - 2024	"Ag Nanoparçacıkların Yeşil Sentezle Thymus Bitkisi Özütünde Hazırlanması ve 4-Nitrofenol'ün İndirgenmesinde Katalitik Kullanımı", TUBİTAK Project
2020 - 2021	2-(6-metilpiridin-2il)-1H-benzimidazol Tipi Ligandlar İçeren Pd Komplekslerinin Sentezi Karakterizasyonu ve Katalitik Uygulamaları, Project Supported by Higher Education Institutions
2019 - 2020	İkidişli Schiff bazı ligantları içeren yeni geçiş metal komplekslerinin sentezi ve katalitik/biyolojik aktivitelerinin incelenmesi, Project Supported by Higher Education Institutions
2018 - 2019	Yeni boranil bileşiklerin sentezi ve optik özellikleri Deneysel ve teorik çalışma, Project Supported by Higher Education Institutions
2018 - 2018	İKİ- VE ÜÇ- DİŞLİ BENZİMİDAZOL LİGANTLAR İÇEREN YENİ RUTENYUM KOMPLEKSLERİN SENTEZ VE KARAKTERİZASYONLARI: DSSC'LER İÇİN YENİ BOYALAR, Project Supported by Higher Education Institutions
2014 - 2015	2-(1H-Benzimidazol-2-il)kinolin türevleri içeren Ru komplekslerinin sentezi ve katalitik aktivitelerinin incelenmesi, Project Supported by Higher Education Institutions
2011 - 2013	Kanser Terapisi İçin Nitroredüktaz/İlaç-Öncü (Prodrug) Sistemlerinin Geliştirilmesi - Tübitak 1001, TUBİTAK Project
2010 - 2012	Bazı şifalı bitkilerin ekonomiye kazandırılması tere (Lepidium sativum L.) bitkisinin antioksidan sitotoksit, enzim aktif özüt ve bileşenlerinin belirlenmesi, Project Supported by Higher Education Institutions

## Tasks In Event Organizations

17 Mayıs 2016	Tercan Yavaşoğlu M., OEMT 2016 2nd International Conference on Organic Electronic Material Technologies, Scientific Congress, Çanakkale, Turkey
23 Ağustos 2015	Ay M., Öztürk Ö. F., Güngör T., Karakaya S., KARACAN E., TERCAN YAVAŞOĞLU M., 27. Ulusal Kimya Kongresi, Scientific Congress, Çanakkale, Turkey
24 Eylül 2013	Tercan Yavaşoğlu M., 1. Ulusal Kromatografi Uygulamalı Yazokulu, Science / Art Camp or Summer School Organization, Çanakkale, Turkey

## **Metrics**

Publication: 41  
Citation (WoS): 86  
Citation (Scopus): 100  
H-Index (WoS): 6  
H-Index (Scopus): 6

## **Scholarships**

2011 - 2013	Proje Bursiyeri, TUBITAK
2011 - 2011	Yök Yurtdışı Araştırma Bursu (İngiltere), YOK

## **Non Academic Experience**

2011 - 2011	University of Wolverhampton
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