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### Eğitim Bilgileri

Ön Lisans, Anadolu Üniversitesi, Açıköğretim Fakültesi, Otel, Lokanta Ve İkram Hizmetleri Bölümü, Türkiye 2020 - Devam Ediyor

Post Doktora, Argonne National Laboratory, Chemical Sciences and Engineering Division, Catalysis Science Program, Amerika Birleşik Devletleri 2018 - 2019

Doktora, The Ohio State University, Faculty of Engineering, Chemical and Biomolecular Engineering, Amerika Birleşik Devletleri 2013 - 2018

Yüksek Lisans, Orta Doğu Teknik Üniversitesi, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, Türkiye 2010 - 2012

Lisans, Orta Doğu Teknik Üniversitesi, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, Türkiye 2005 - 2010

### Yaptığı Tezler

Doktora, Swellable Organically Modified Silica as a Novel Catalyst Scaffold for Catalytic Treatment of Water Contaminated with Trichloroethylene, The Ohio State University, 2018

Yüksek Lisans, Bi-functional nanostructured novel catalysts for dimethyl ether synthesis, Orta Doğu Teknik Üniversitesi, 2012

### Araştırma Alanları

Atıksuların Toplanması ve Arıtımı, Gaz Kontrolü, Su Kirliliği ve Kontrolü, Toprak ve Yeraltısu Kirliliği ve Kontrolü, Polimer Teknolojisi, Çevre Teknolojileri, İnorganik Teknolojiler, Yakıtlar ve Yanma Teknolojileri, Kimyasal Reaksiyon Mühendisliği, Kataliz ve Katalitik Süreçler, Kaplama Teknolojileri, Nanomalzemeler

### Akademik Unvanlar / Görevler

Dr.Öğr.Üyesi, Orta Doğu Teknik Üniversitesi, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, 2020 - Devam Ediyor  
Araştırma Görevlisi, Orta Doğu Teknik Üniversitesi, Mühendislik Fakültesi, Kimya Mühendisliği Bölümü, 2010 - 2012

### Akademik İdari Deneyim

Bölüm Başkan Yardımcısı, Orta Doğu Teknik Üniversitesi, 2021 - Devam Ediyor

## Verdiği Dersler

Thermodynamics, Lisans, 2019 - 2020

### SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

- I. **Grafted nickel-promoter catalysts for dry reforming of methane identified through high-throughput experimentation**  
Ferrandon M. S. , Byron C., Celik G., Zhang Y., Ni C., Sloppy J., McCormick R. A. , Booksh K., Teplyakov A., Delferro M.  
APPLIED CATALYSIS A-GENERAL, cilt.629, 2022 (SCI İndekslerine Giren Dergi)
- II. **Synthetic Lubricants Derived from Plastic Waste and their Tribological Performance**  
Hackler R. A. , Vyavhare K., Kennedy R. M. , ÇELİK G., Kanbur U., Griffin P. J. , Sadow A. D. , Zang G., Elgowainy A., Sun P., et al.  
ChemSusChem, cilt.14, sa.19, ss.4181-4189, 2021 (SCI İndekslerine Giren Dergi)
- III. **On the dual role of the reactant during aqueous phase hydrodechlorination of trichloroethylene (HDC of TCE) using Pd supported on swellable organically modified silica (SOMS)**  
Ailawar S., Hunoor A., Rudzinski B., Celik G., Burel L., Millet J., Miller J. T. , Edmiston P. L. , Ozkan U. S.  
APPLIED CATALYSIS B-ENVIRONMENTAL, cilt.291, 2021 (SCI İndekslerine Giren Dergi)
- IV. **Effect of High Temperature on Swellable Organically Modified Silica (SOMS) and Its Application for Preferential CO Oxidation in H-2 Rich Environment**  
Basu D., Ailawar S., Celik G., Edmiston P., Ozkan U. S.  
CHEMCATCHEM, cilt.12, sa.14, ss.3753-3768, 2020 (SCI İndekslerine Giren Dergi)
- V. **Activation of Low-Valent, Multiply M-M Bonded Group VI Dimers toward Catalytic Olefin Metathesis via Surface Organometallic Chemistry**  
Chapovetsky A., Langeslay R. R. , Celik G., Perras F. A. , Pruski M., Ferrandon M. S. , Wegener E. C. , Kim H., Dogan F., Wen J., et al.  
ORGANOMETALLICS, cilt.39, sa.7, ss.1035-1045, 2020 (SCI İndekslerine Giren Dergi)
- VI. **Role of Boron in Enhancing the Catalytic Performance of Supported Platinum Catalysts for the Nonoxidative Dehydrogenation of n-Butane**  
Byron C., Bai S., Celik G., Ferrandon M. S. , Liu C., Ni C., Mehdad A., Delferro M., Lobo R. F. , Teplyakov A. V.  
ACS Catalysis, cilt.10, sa.2, ss.1500-1510, 2020 (SCI İndekslerine Giren Dergi)
- VII. **Mechanistic Aspects of a Surface Organovanadium(III) Catalyst for Hydrocarbon Hydrogenation and Dehydrogenation**  
Kaphan D. M. , Ferrandon M. S. , Langeslay R. R. , Celik G., Wegener E. C. , Liu C., Niklas J., Poluektov O. G. , Delferro M.  
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- VIII. **Upcycling Single-Use Polyethylene into High-Quality Liquid Products**  
Celik G., Kennedy R. M. , Hackler R. A. , Ferrandon M., Tennakoon A., Patnaik S., Lapointe A. M. , Ammal S. C. , Heyden A., Perras F. A. , et al.  
ACS Central Science, cilt.5, sa.11, ss.1795-1803, 2019 (SCI İndekslerine Giren Dergi)
- IX. **Electrophilic Organoiridium(III) Pincer Complexes on Sulfated Zirconia for Hydrocarbon Activation and Functionalization**  
Syed Z. H. , Kaphan D. M. , Perras F. A. , Pruski M., Ferrandon M. S. , Wegener E. C. , Celik G., Wen J., Liu C., Dogan F., et al.  
Journal of the American Chemical Society, cilt.141, sa.15, ss.6325-6337, 2019 (SCI İndekslerine Giren Dergi)
- X. **Aqueous-Phase Hydrodechlorination of Trichloroethylene over Pd-Based Swellable Organically Modified Silica: Catalyst Deactivation Due to Sulfur Species**  
Celik G., Ailawar S. A. , Gunduz S., Miller J. T. , Edmiston P. L. , Ozkan U. S.  
Industrial and Engineering Chemistry Research, cilt.58, sa.10, ss.4054-4064, 2019 (SCI İndekslerine Giren Dergi)
- XI. **Formation of carbonaceous deposits on Pd-based hydrodechlorination catalysts: Vibrational spectroscopy investigations over Pd/Al<sub>2</sub>O<sub>3</sub> and Pd/SOMS**

- Celik G., Ailawar S. A. , Gunduz S., Edmiston P. L. , Ozkan U. S.  
Catalysis Today, cilt.323, ss.129-140, 2019 (SCI İndekslerine Giren Dergi)
- XII. **Effect of alumina incorporation on the sulfur tolerance of the dual-catalyst aftertreatment system for reduction of nitrogen oxides under lean conditions**  
Sinha Majumdar S., Alexander A., Gawade P., Celik G., Ozkan U. S.  
Catalysis Today, cilt.320, ss.204-213, 2019 (SCI İndekslerine Giren Dergi)
- XIII. **Aqueous-phase hydrodechlorination of trichloroethylene over Pd-based swellable organically-modified silica (SOMS): Catalyst deactivation due to chloride anions**  
Celik G., Ailawar S. A. , Gunduz S., Miller J. T. , Edmiston P. L. , Ozkan U. S.  
Applied Catalysis B: Environmental, cilt.239, ss.654-664, 2018 (SCI İndekslerine Giren Dergi)
- XIV. **Atomically Precise Strategy to a PtZn Alloy Nanocluster Catalyst for the Deep Dehydrogenation of n - Butane to 1,3-Butadiene**  
Camacho-Bunquin J., Ferrandon M. S. , Sohn H., Kropf A. J. , Yang C., Wen J., Hackler R. A. , Liu C., Celik G., Marshall C. L. , et al.  
ACS Catalysis, cilt.8, sa.11, ss.10058-10063, 2018 (SCI İndekslerine Giren Dergi)
- XV. **Swellable Organically Modified Silica (SOMS) as a Catalyst Scaffold for Catalytic Treatment of Water Contaminated with Trichloroethylene**  
Celik G., Ailawar S. A. , Sohn H., Tang Y., Tao F. F. , Miller J. T. , Edmiston P. L. , Ozkan U. S.  
ACS Catalysis, cilt.8, sa.8, ss.6796-6809, 2018 (SCI İndekslerine Giren Dergi)
- XVI. **Enhancement in Oxygen Reduction Reaction Activity of Nitrogen-Doped Carbon Nanostructures in Acidic Media through Chloride-Ion Exposure**  
Jain D., Mamtani K., Gustin V., Gunduz S., Celik G., Waluyo I., Hunt A., Co A. C. , Ozkan U. S.  
ChemElectroChem, cilt.5, sa.14, ss.1966-1975, 2018 (SCI İndekslerine Giren Dergi)
- XVII. **Hydrodechlorination of trichloroethylene over Pd supported on swellable organically-modified silica (SOMS)**  
Sohn H., Celik G., Gunduz S., Dean S. L. , Painting E., Edmiston P. L. , Ozkan U. S.  
Applied Catalysis B: Environmental, cilt.203, ss.641-653, 2017 (SCI İndekslerine Giren Dergi)
- XVIII. **In-situ incorporation of binder during sol-gel preparation of Pd-based sulfated zirconia for reduction of nitrogen oxides under lean-burn conditions: Effect on activity and wash-coating characteristics**  
Sinha Majumdar S., Celik G., Alexander A., Gawade P., Ozkan U. S.  
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- XIX. **Oxygen Mobility in Pre-Reduced Nano- and Macro-Ceria with Co Loading: An AP-XPS, In-Situ DRIFTS and TPR Study**  
Sohn H., Celik G., Gunduz S., Dogu D., Zhang S., Shan J., Tao F. F. , Ozkan U. S.  
Catalysis Letters, cilt.147, sa.11, ss.2863-2876, 2017 (SCI İndekslerine Giren Dergi)
- XX. **Effect of high-temperature on the swellable organically-modified silica (SOMS) and its application to gas-phase hydrodechlorination of trichloroethylene**  
Sohn H., Celik G., Gunduz S., Majumdar S. S. , Dean S. L. , Edmiston P. L. , Ozkan U. S.  
Applied Catalysis B: Environmental, cilt.209, ss.80-90, 2017 (SCI İndekslerine Giren Dergi)
- XXI. **Probing the Oxygen Reduction Reaction Active Sites over Nitrogen-Doped Carbon Nanostructures (CNx) in Acidic Media Using Phosphate Anion**  
Mamtani K., Jain D., Zemlyanov D., Celik G., Luthman J., Renkes G., Co A. C. , Ozkan U. S.  
ACS Catalysis, cilt.6, sa.10, ss.7249-7259, 2016 (SCI İndekslerine Giren Dergi)
- XXII. **Investigation of the effect of alumina binder addition to Pd/SO<sub>4</sub><sup>2-</sup> – ZrO<sub>2</sub> Catalysts during sol–gel synthesis**  
Sinha Majumdar S., Celik G., Ozkan U.  
Industrial and Engineering Chemistry Research, cilt.55, sa.44, ss.11445-11457, 2016 (SCI İndekslerine Giren Dergi)
- XXIII. **Performance of silicotungstic acid incorporated mesoporous catalyst in direct synthesis of dimethyl ether from syngas in the presence and absence of CO<sub>2</sub>**  
Celik G., Arinan A., Bayat A., Ozbekelge H. O. , Doğu T., Varışlı D.

## Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar

- I. **Aqueous Phase Hydrodechlorination of Trichloroethylene Using Pd Supported on Swellable Organically Modified Silica (SOMS): Deactivation Due to Chloride and Sulfur Species**  
Ozkan U. S. , Ailawar S. A. , Hunoor A., ÇELİK G., Gunduz S., Miller J. T. , Tao F. F. , Edmiston P. L.  
2019 AIChE Annual Meeting, Orlando, FL, 10 - 15 Kasım 2019
- II. **Swellable Organically Modified Silica (SOMS) As a Catalyst Scaffold for Catalytic Treatment of Water through Hydrogenation and Hydrogenolysis Reactions**  
Ozkan U. S. , Ailawar S. A. , Hunoor A., ÇELİK G., Gunduz S., Miller J. T. , Tao F. F. , Edmiston P. L.  
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- III. **Catalytic upcycling of waste polymers by supported metal catalysts**  
Kennedy R. M. , ÇELİK G., Hackler R. A. , ammal s., Ferrandon M. S. , LaPointe A. M. , Sadow A. D. , Heyden A., Poepelmeier K. R. , Delferro M.  
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- IV. **Swellable Organically Modified Silica (SOMS): A Novel Support for Aqueous Phase Hydrodechlorination of Trichloroethylene**  
Ailawar S. A. , ÇELİK G., Hunoor A., Gunduz S., Edmiston P. L. , Ozkan U. S.  
NAM 26 - North American Catalysis Society Meeting, 23 - 28 Haziran 2019
- V. **Atomically Precise Strategy to Synthesize Bimetallic Platinum Nanoclusters for Non-Oxidative Dehydrogenation Catalysis**  
ÇELİK G., Camacho-Bunquin J., Ferrandon M. S. , Sohn H., Kropf A. J. , Yang C., Wen J., Hackler R. A. , Liu C., Marshall C. L. , et al.  
NAM 26 - North American Catalysis Society Meeting, 23 - 28 Haziran 2019
- VI. **Mechanistic Studies of a Silica Supported Organovanadium(III) Catalyst for Hydrocarbon Hydrogenation and Dehydrogenation**  
Kaphan D. M. , Langeslay R. R. , Ferrandon M. S. , Liu C., ÇELİK G., Delferro M.  
NAM 26 - North American Catalysis Society Meeting, 23 - 28 Haziran 2019
- VII. **Electrophilic Pincer-Iridium (III) Complexes Supported on Metal Oxides for C-H Functionalization**  
Syed Z., Kaphan D. M. , Perras F. A. , Pruski M., Ferrandon M. S. , Wegener E. C. , Kropf A. J. , ÇELİK G., Wen J., Liu C., et al.  
NAM 26 - North American Catalysis Society Meeting, 23 - 28 Haziran 2019
- VIII. **Surface structural-chemical characterization of a supported organovanadium(III) catalyst**  
Kaphan D. M. , Langeslay R. R. , Ferrandon M. S. , ÇELİK G., Liu C., Sattelberger A. P. , Delferro M.  
257th National Meeting of the American-Chemical-Society (ACS), Orlando, Amerika Birleşik Devletleri, 31 Mart - 04 Nisan 2019, cilt.257
- IX. **Swellable Organically Modified Silica (SOMS): A Novel Support for Pd Catalyzed Hydrodechlorination of Trichloroethylene in Aqueous Phase**  
ÇELİK G., Ailawar S. A. , Gunduz S., Miller J. T. , Tao F. F. , Edmiston P. L. , Ozkan U. S.  
2018 AIChE Annual Meeting, Pittsburgh, PA, Amerika Birleşik Devletleri, 28 Ekim - 02 Kasım 2018
- X. **Hydrodechlorination of trichloroethylene using Pd catalysts supported on swellable organically modified silica (SOMS)**  
Ozkan U. S. , ÇELİK G., Ailawar S. A. , Sohn H., Gunduz S., Edmiston P. L.  
256th National Meeting and Exposition of the American-Chemical-Society (ACS) - Nanoscience, Nanotechnology and Beyond, Boston, 19 - 23 Ağustos 2018, cilt.256
- XI. **Catalytic Treatment of Water Contaminated with Trichloroethylene**  
ÇELİK G., Sohn H., Gunduz S., Ailawar S. A. , Edmiston P. L. , Ozkan U. S.  
NAM 25 - North American Catalysis Society Meeting, Denver, 4 - 09 Haziran 2017
- XII. **Investigation of the Effect of Alumina Binder Addition to Palladium Supported on Sulfated Zirconia**

### **Catalysts during Sol-Gel Synthesis**

Majumdar S. S. , ÇELİK G., Ozkan U. S.

NAM 25 - North American Catalysis Society Meeting, Denver, 4 Haziran - 04 Eylül 2017

- XIII. **Aqueous-phase Hydrodechlorination of Trichloroethene over Pd-supported on Swellable Organically-modified Silica (SOMS)**  
ÇELİK G., Ailawar S. A. , Gunduz S., Miller J. T. , Tao F. F. , Edmiston P. L. , Ozkan U. S.  
2016 AIChE Annual Meeting, San-Francisco, Kostarika, 13 Kasım 2016 - 18 Kasım 2019
- XIV. **Wash-coat development for Lean-burn Engine-exhaust Aftertreatment: A Novel Way of Incorporation of Binder to Pd Supported on Sulfated Zirconia**  
ÇELİK G., Ailawar S. A. , Gunduz S., Miller J. T. , Tao F. F. , Edmiston P. L. , Ozkan U. S.  
2016 AIChE Annual Meeting, San-Francisco, Kostarika, 13 Kasım 2016 - 18 Kasım 2019
- XV. **Catalytic Treatment of Water Contaminated with Chlorinated Hydrocarbons**  
ÇELİK G., Ailawar S. A. , Gunduz S., Miller J. T. , Tao F. F. , Edmiston P. L. , Ozkan U. S.  
2016 AIChE Annual Meeting, San-Francisco, Kostarika, 13 Kasım 2016 - 18 Kasım 2019
- XVI. **Wash-Coat Development for Lean-Burn Engine-Exhaust Aftertreatment: Incorporation of Binder to Pd Supported on Sulfated Zirconia**  
Majumdar S. S. , ÇELİK G., Ozkan U. S.  
NAM 24 - North American Catalysis Society Meeting, Pittsburgh, PA, 14 - 19 Temmuz 2015
- XVII. **Hydrogenation and hydrogenolysis reactions involved in treatment of water contaminated with chlorinated hydrocarbons**  
Sohn H., ÇELİK G., Edmiston P. L. , Ozkan U. S.  
ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY, 21 - 25 Ağustos 2016, cilt.252
- XVIII. **From synthesis gas to a clean transportation fuel dimethyl ether: New nanocomposite bifunctional catalyst pairs**  
Arslan A., Bayat A., ÇELİK G., DOĞU T.  
Nanotechnology 2013: Advanced Materials, CNTs, Particles, Films and Composites - 2013 NSTI Nanotechnology Conference and Expo, NSTI-Nanotech 2013, Washington, Amerika Birleşik Devletleri, 12 - 16 Mayıs 2013, cilt.1, ss.460-462

### **Atıflar**

Toplam Atıf Sayısı (WOS):327

h-indeksi (WOS):10

### **Burslar**

2232 - Uluslararası Lider Araştırmacılar Programı, TÜBİTAK, 2020 - Devam Ediyor