

Asst. Prof. GÖKHAN ÇELİK

Personal Information

Office Phone: [+90 312 210 2619](tel:+903122102619)

Fax Phone: [+90 312 210 2600](tel:+903122102600)

Email: gcelik@metu.edu.tr

Web: <https://avesis.metu.edu.tr/gcelik>

Address: Kimya Mühendisliği, C-Blok, Z10



Education Information

Post Doctorate, Argonne National Laboratory, Chemical Sciences and Engineering Division, Catalysis Science Program, United States Of America 2018 - 2019

Doctorate, The Ohio State University, Faculty of Engineering, Chemical and Biomolecular Engineering, United States Of America 2013 - 2018

Post Graduate, Middle East Technical University, Faculty Of Engineering, Department Of Chemical Engineering, Turkey 2010 - 2012

Under Graduate, Middle East Technical University, Faculty Of Engineering, Department Of Chemical Engineering, Turkey 2005 - 2010

Research Areas

Waste Water Collection and Treatment, Gas Control, Water Pollution and Control, Soil and Groundwater Pollution and Control, Polymer Technology, Environmental Chemistry and Technology, Inorganic Technologies, Fuels and Combustion Technology, Chemical Reaction Engineering, Catalysis and Catalytic Processes, Plating, Nanomaterials

Academic Titles / Tasks

Assistant Professor, Middle East Technical University, Faculty Of Engineering, Department Of Chemical Engineering, 2020 - Continues

Research Assistant, Middle East Technical University, Faculty Of Engineering, Department Of Chemical Engineering, 2010 - 2012

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- **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, vol.39, pp.1035-1045, 2020 (Journal Indexed in SCI)
- **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, vol.10, pp.1500-1510, 2020 (Journal Indexed in SCI)
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.
- ACS Catalysis, vol.9, pp.11055-11066, 2019 (Journal Indexed in SCI)
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, vol.5, pp.1795-1803, 2019 (Journal Indexed in SCI)
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, vol.141, pp.6325-6337, 2019 (Journal Indexed in SCI)
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, vol.58, pp.4054-4064, 2019 (Journal Indexed in SCI)
Formation of carbonaceous deposits on Pd-based hydrodechlorination catalysts: Vibrational spectroscopy investigations over Pd/Al₂O₃ and Pd/SOMS
 Celik G., Ailawar S. A. , Gunduz S., Edmiston P. L. , Ozkan U. S.
- Catalysis Today, vol.323, pp.129-140, 2019 (Journal Indexed in SCI)
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, vol.320, pp.204-213, 2019 (Journal Indexed in SCI)
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, vol.239, pp.654-664, 2018 (Journal Indexed in SCI)
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, vol.8, pp.10058-10063, 2018 (Journal Indexed in SCI)
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, vol.8, pp.6796-6809, 2018 (Journal Indexed in SCI)
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, vol.5, pp.1966-1975, 2018 (Journal Indexed in SCI)
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, vol.203, pp.641-653, 2017 (Journal Indexed in SCI)
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.

Applied Catalysis B: Environmental, vol.202, pp.134-146, 2017 (Journal Indexed in SCI)

● **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, vol.147, pp.2863-2876, 2017 (Journal Indexed in SCI)

● **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, vol.209, pp.80-90, 2017 (Journal Indexed in SCI)

● **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, vol.6, pp.7249-7259, 2016 (Journal Indexed in SCI)

● **Investigation of the effect of alumina binder addition to Pd/SO₄²⁻ – ZrO₂ Catalysts during sol-gel synthesis**

Sinha Majumdar S., Celik G., Ozkan U.

Industrial and Engineering Chemistry Research, vol.55, pp.11445-11457, 2016 (Journal Indexed in SCI)

● **Performance of silicotungstic acid incorporated mesoporous catalyst in direct synthesis of dimethyl ether from syngas in the presence and absence of CO₂**

Celik G., Arinan A., Bayat A., Ozbelge H. O. , DOĞU T., VARIŞLI D.

Topics in Catalysis, vol.56, pp.1764-1774, 2013 (Journal Indexed in SCI Expanded)

Refereed Congress / Symposium Publications in Proceedings

● **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, United States Of America, 12 - 16 May 2013, vol.1, pp.460-462

Citations

Total Citations (WOS):176

h-index (WOS):7

Scholarships

2232 - Uluslararası Lider Araştırmacılar Programı, TÜBİTAK, 2020 - Continues