

Assoc. Prof. Alper Sariođlan

Personal Information

Office Phone: [+90 212 285 6856](tel:+902122856856)

Email: asarioglan@itu.edu.tr

Web: <https://avesis.itu.edu.tr/asarioglan>

Address: İstanbul Teknik Üniversitesi, Kimya-Metalürji Fakóltesi, Kimya Mühendisliđi Bölümü, 34469, Maslak/İstanbul

International Researcher IDs

ORCID: 0000-0001-7797-9112

Publons / Web Of Science ResearcherID: ABA-7837-2020

ScopusID: 6506254720

Yoksis Researcher ID: 220386

Biography

1973 Samsun doğumludur. 1994 yılında İstanbul Teknik Üniversitesi Kimya-Metalürji Fakóltesi Kimya Mühendisliđi Bölümünden mezun olmuştur. Yüksek lisans ve doktora çalışmalarını da İstanbul Teknik Üniverstesi Kimya Mühendisliđi Bölümünde tamamlamıştır. Doktora çalışmaları sırasında 1 yıl Fransa'da CNRS'e bađlı Katalizör Araştırma Enstitüsü'nde bulunmuştur. 1999 yılında Araştırmacı olarak başladığı TÜBİTAK Marmara Araştırma Merkezi Eneji Enstitüsü'ndeki çalışmalarında termokimyasal dönüşüm prosesleri üzerine uzmanlık kazanmış ve bu alanda ulusal ve uluslararası projelerde koordinatör ve araştırmacı olarak görev almıştır. Katalitik kimyasal proseslerin tasarımı, gaz yıkama kolon tasarımları, sentez gazının deđerli kimyasallara ve sentetik yakıtlara dönüştürölmesi için katalizör ve proses geliştirme, gaz analizleri, kömür ve biyokütle gazlaştırma ve pirolizi, sentez gazı temizleme ve gaz şartlandırma konularında laboratuvar ve pilot tesis saha tecrübesi bulunmaktadır. 2020 yılında Başuzman Araştırmacı olarak görev aldığı TÜBİTAK Marmara Araştırma Merkezi Enerji Enstitüsü'nden ayrılarak İstanbul Teknk Üniversitesi Kimya-Metalürji Fakóltesi Kimya Mühendisliđi Bölümü'nde Öğretim Üyesi olarak göreve başlamıştır.

Education Information

Doctorate, Istanbul Technical University, Kimya-Metalurji, Kimya Mühendisliđi, Turkey 2000 - 2006

Postgraduate, Istanbul Technical University, Kimya-Metalurji, Kimya Mühendisliđi, Turkey 1995 - 1998

Undergraduate, Istanbul Technical University, Kimya-Metalurji, Kimya Mühendisliđi, Turkey 1990 - 1994

Dissertations

Doctorate, Preparation and Characterization of MFI-Supported Catalysts For The Aromatization of Benzene, Istanbul Technical University, Kimya-Metalurji, Kimya Mühendisliđi, 2006

Postgraduate, Su Buharı ile Modifiye Edilen HZSM-5 Katalizörlerle MTBE Sentezi, Istanbul Technical University, Kimya-Metalurji, Kimya Mühendisliđi, 1998

Research Areas

Chemical Engineering and Technology, Process and Reactor Design, Catalysis and Catalytic Processes, Engineering and Technology

Academic Titles / Tasks

Associate Professor, Istanbul Technical University, Kimya-Metalurji, Kimya Mühendisliği, 2021 - Continues

Advising Theses

Sarioğlu A., Turan A. Z., HAFİF OLEFİN ÜRETİMİ İÇİN DESTEKLİ DEMİR TEMELLİ FISCHER TROPSCH KATALİZÖRLERİ ÜZERİNDE BİR KİNETİK ÇALIŞMA VE MODEL ANALİZİ, Postgraduate, K.BÜLBÜL(Student), 2023

Sarioğlu A., High Temperature Pyrolysis of Composite Wastes for Syngas Production, Postgraduate, Y.TOLUNAY(Student), 2023

Sarioğlu A., FABRICATION OF ENHANCED CORE-SHELL CO-ZIF-67@MOX (M = ZN, MN AND K) NANOCOMPOSITES VIA INTERMEDIATE PYROLYSIS AND PLASMA TREATMENT FOR FISCHER TROPSCH SYNTHESIS, Postgraduate, Y.AYDEMİR(Student), 2023

Sarioğlu A., Bayazit Ş. S., EŞZAMANLI KARBONDİOKSİT KULLANIMI VE HİDROJEN DÖNÜŞÜMÜ İÇİN NİKEL-DEMİR BAZLI KATALİZÖR ÜZERİNDE KARBONDİOKSİTTEN METAN ELDESİ, Postgraduate, B.KAPLAN(Student), 2023

Sarioğlu A., Okur O., FISCHER-TROPSCH SENTEZİ İLE HAFİF OLEFİN ÜRETİMİ İÇİN AZOT VE BOR DOPLU AKTİF KARBON DESTEKLİ DEMİR KATALİZÖRLERİNİN GELİŞTİRİLMESİ, Postgraduate, P.ŞAKOĞLU(Student), 2022

Sarioğlu A., Bilgin Şimşek E., Development of zinc titanate-based H₂S adsorbents for biomass gasification process, Doctorate, Ö.TUNA(Student), 2021

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Effect of sodium incorporation into Fe-Zn catalyst for Fischer- Tropsch synthesis to light olefins**
Fatih Y., Burgun U., Sarioğlu A., Atakül H.
Molecular Catalysis, vol.535, 2023 (SCI-Expanded)
- II. **Effects of Rare Earth Metal Promotion over Zeolite-Supported Fe-Cu-Based Catalysts on the Light Olefin Production Performance in Fischer-Tropsch Synthesis**
Burgun U., Zonouz H. R., Okutan H. C., Atakül H., Senkan S., Sarioğlu A., Gümüşlü Gür G.
ACS Omega, 2022 (SCI-Expanded)
- III. **Kinetic modeling of Fischer-Tropsch-to-olefins process via advanced optimization**
Turan A. Z., Atac O., Kurucu O. A., Ersoz A., Sarioğlu A., Okutan H. C.
INTERNATIONAL JOURNAL OF CHEMICAL KINETICS, vol.54, no.1, pp.3-15, 2022 (SCI-Expanded)
- IV. **A new approach for integrated system of biomass gasification combined reforming and desulfurization processes consisting of Ni/Al₂O₃ and Cu-Zn₂TiO₄ heterostructure ceramic filters**
Tuna O., BİLGİN ŞİMŞEK E., Sarioğlu A.
CHEMICAL ENGINEERING AND PROCESSING-PROCESS INTENSIFICATION, vol.165, 2021 (SCI-Expanded)
- V. **Poly(2,6-diphenyl-p-phenylene oxide) supported iron catalysts for the synthesis of lower olefins via Fischer-Tropsch reaction**
Tuftup M., KAYAMAN APOHAN N., Ozkara-Sarioğlu S., Unveren E., Atac O., Sarioğlu A.
REACTION KINETICS MECHANISMS AND CATALYSIS, vol.132, pp.695-715, 2021 (SCI-Expanded)
- VI. **Multifunctional and highly active zinc titanate incorporated with copper for adsorptive hot syngas desulfurization and photocatalytic dye degradation**
Tuna Ö., Bilgin Simsek E., Sarioğlu A., Durak Çetin Y.
Journal of the Taiwan Institute of Chemical Engineers, vol.112, pp.388-396, 2020 (SCI-Expanded)
- VII. **Influence of the process conditions on the kinetic behaviour of zinc orthotitanate for syngas clean-up**
Tuna O., Simsek E. B., Sarıoğlu A., DurakÇetin Y.
BIOMASS & BIOENERGY, vol.128, 2019 (SCI-Expanded)
- VIII. **Development of calcium silicate-based catalytic filters for biomass fuel gas reforming**

Turan A. Z., Cetin Y., Tuna O., Sarioglan A.

INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.43, no.3, pp.1217-1231, 2019 (SCI-Expanded)

- IX. **Investigation of a novel & integrated simulation model for hydrogen production from lignocellulosic biomass**
Ersoz A., DurakCetin Y., Sarioglan A., Turan A. Z., Mert M. S., Yuksel F., FİGEN H. E., Guldal N. O., Karaismailoglu M., BAYKARA Z. S.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.43, no.2, pp.1081-1093, 2018 (SCI-Expanded)
- X. **Decomposition of ammonia: The effect of syngas components on the activity of zeolite H beta supported iron catalyst**
Sarioglan A., Durak-Cetin Y., Okutan H. C., Akgun F.
CHEMICAL ENGINEERING SCIENCE, vol.171, pp.440-450, 2017 (SCI-Expanded)
- XI. **The effect of support type on the activity of zeolite supported iron catalysts for the decomposition of ammonia**
Durak-Cetin Y., SARIOGLAN S., SARIOGLAN A., Okutan H. C.
Reaction Kinetics, Mechanisms and Catalysis, vol.118, no.2, pp.683-699, 2016 (SCI-Expanded)
- XII. **Hot Gas Clean-Up with Dolomites: Effect of Gas Composition on Sulfur Removal Activity**
Ay S., Atakül H., SARIOGLAN A., AKGUN F., ISIK-GULSAC I., CETIN Y., URESIN E., ER O. O., AKSOY P.
Canadian Journal of Chemical Engineering, vol.93, no.9, pp.1643-1650, 2015 (SCI-Expanded)
- XIII. **An experimental study for H₂S and CO₂ removal via caustic scrubbing system**
Uresin E., SARAÇ H. İ., Sarioglan A., Ay S., Akgun F.
PROCESS SAFETY AND ENVIRONMENTAL PROTECTION, vol.94, pp.196-202, 2015 (SCI-Expanded)
- XIV. **An EPR and NMR study on Mo/HZSM-5 catalysts for the aromatization of methane: Investigation of the location of the pentavalent molybdenum**
Vu Thi Thu Ha V. T. T. H., Sarioglan A., Erdem-Senatalar A., Ben Taarit Y.
Journal of Molecular Catalysis A: Chemical, vol.378, pp.279-284, 2013 (SCI-Expanded)
- XV. **Design studies for monolithic high temperature shift catalysts: Effect of operational parameters**
Ay S., Atakül H., OZYONUM G. N., SARIOGLAN A., ERSOZ A., AKGUN F., AKSOY P.
Fuel Processing Technology, vol.116, pp.175-181, 2013 (SCI-Expanded)
- XVI. **Low acidity ZSM-5 supported iron catalysts for Fischer-Tropsch synthesis**
Baranak M., GURUNLU B., SARIOGLAN A., ATAC O., Atakül H.
Catalysis Today, vol.207, pp.57-64, 2013 (SCI-Expanded)
- XVII. **Tar removal on dolomite and steam reforming catalyst: Benzene, toluene and xylene reforming**
Sarioglan A.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.37, no.10, pp.8133-8142, 2012 (SCI-Expanded)
- XVIII. **A 5 kW(t) catalytic burner for PEM fuel cells: Effect of fuel type, fuel content and fuel loads on the capacity of the catalytic burner**
Sarioglan A., Korkmaz O. C., Kaytaz A., Akar E., Akgun F.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.35, no.21, pp.11855-11860, 2010 (SCI-Expanded)
- XIX. **Activities of MFI-Supported rhenium catalysts for the aromatization of methane: Effect of cationic form of the inorganic carrier**
Sarioglan A., Savasci O. T., Erdem-Senatalar A., Ha V. T., Sapaly G., Ben Taarit Y.
CATALYSIS LETTERS, vol.118, pp.123-128, 2007 (SCI-Expanded)
- XX. **Diesel evaporation as the first step of hydrogen production**
Sarioglan A., Olgun H., Baranak M., Ersoz A., Atakul H., Ozdogan S.
International Journal of Hydrogen Energy, vol.32, no.14, pp.2895-2901, 2007 (SCI-Expanded)
- XXI. **The effect of support morphology on the activity of HZSM-5-supported molybdenum catalysts for the aromatization of methane**
Sarioglan A., Savasci O. T., Erdem-Senatalar A., Tuel A., Sapaly G., Ben Taarit Y.
JOURNAL OF CATALYSIS, vol.246, no.1, pp.35-39, 2007 (SCI-Expanded)
- XXII. **The effect of CaC₂ on the activity of MFI-supported molybdenum catalysts for the aromatization of methane**

Sariođlan A., Erdem-Senatalar A., Savasci O., Ben Taarit Y.
Journal of Catalysis, vol.228, no.1, pp.114-120, 2004 (SCI-Expanded)

XXIII. The effect of dealumination on the apparent and actual rates of aromatization of methane over MFI-supported molybdenum catalysts

Sariođlan A., Erdem-Senatalar A., Savasci O., Ben Taarit Y.
JOURNAL OF CATALYSIS, vol.226, no.1, pp.210-214, 2004 (SCI-Expanded)

XXIV. Effects of low-temperature gel aging on the synthesis of zeolite Y at different alkalinities

Jülide Körođlu H., Sariođlan A., Tatlier M., Erdem-Şenatalar A., Tunç Savaşçı Ö.
Journal of Crystal Growth, vol.241, no.4, pp.481-488, 2002 (SCI-Expanded)

XXV. Selection of an active zeolite catalyst and kinetics of vapor phase esterification of acetic acid with ethyl alcohol

Aliyev A., Sarijanov E., Tunç Savaşçı Ö., Mikailov R., Shakhtakhtinsky T., Sariođlan A., Poladly P., Kuliyeu A.
Studies in Surface Science and Catalysis, pp.787-794, 2002 (SCI-Expanded)

Books & Book Chapters

I. Zeolites and Molecular Frameworks for Adsorption-based Syngas Purification

Sariođlan A., Okutan H. C., Ersolmaz Ş. B., Turan A. Z., Karahan H. E., Ghalei B.
in: Advances in Synthesis Gas: Methods, Technologies and Applications, Mohammad Reza Rahimpour, Mohammed Amin Makarem, Maryam Meshksar, Editor, Elsevier Science, Oxford/Amsterdam , Amsterdam, pp.203-228, 2022

Refereed Congress / Symposium Publications in Proceedings

I. FISCHER-TROPSCH TO OLEFIN REACTION OVER CARBON SUPPORTED IRON CATALYSTS: INVESTIGATION OF UREA DOPED ACTIVATED CARBON IN THE PRESENCE OF SODIUM AND ZINC PROMOTERS

Şakođlu P., Fallahi Y., Okur O., Sariođlan A., Atakül H., Gür G. G.
30th European Biomass Conference and Exhibition, EUBCE 2022, Virtual, Online, 9 - 12 May 2022, pp.1082-1087

Patent

Sariođlan A., Hybrid homogenous-catalytic combustion system, Patent, CHAPTER C Chemistry; Metallurgy, The Invention
Registration Number: US10041668B2 , 2018, 2019

Metrics

Publication: 27
Citation (WoS): 278
Citation (Scopus): 293
H-Index (WoS): 10
H-Index (Scopus): 11

Non Academic Experience

TUBİTAK, İleri Enerji Teknolojileri
TÜBİTAK