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Biography

1973 Samsun doğumludur. 1994 yılında İstanbul Teknik Üniversitesi Kimya-Metalürji Fakültesi Kimya Mühendisliği Bölümünden mezun olmuştur. Yüksek lisans ve doktora çalışmalarını da İstanbul Teknik Üniverstesi Kimya Mühendisliği Bölümünde tamamlamıştır. Doktora çalışmaları sırasında 1 yıl Fransa'da CNRS'e bağlı 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 değerli kimyasallara ve sentetik yakıtlara dönüştürülmesi 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 Fakültesi Kimya Mühendisliği Bölümü'nde Öğretim Üyesi olarak göreve başlamıştır.

Education Information

Doctorate, Istanbul Technical University, Kimya-Metalurji, Kimya Mühendisliği, Turkey 2000 - 2006
Postgraduate, Istanbul Technical University, Kimya-Metalurji, Kimya Mühendisliği, Turkey 1995 - 1998
Undergraduate, Istanbul Technical University, Kimya-Metalurji, Kimya Mühendisliği, Turkey 1990 - 1994

Dissertations

Doctorate, Preparation and Characterization of MFI-Supported Catalysts For The Aromatization of Benzene, Istanbul Technical University, Kimya-Metalurji, Kimya Mühendisliği, 2006
Postgraduate, Su Buharı ile Modifiye Edilen HZSM-5 Katalizörlerle MTBE Sentezi, Istanbul Technical University, Kimya-Metalurji, Kimya Mühendisliği, 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

Sarıoğlan 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
Sarıoğlan A., High Temperature Pyrolysis of Composite Wastes for Syngas Production, Postgraduate, Y.TOLUNAY(Student), 2023
Sarıoğlan 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
Sarıoğlan A., Bayazit Ş. S., EŞZAMANLI KARBONDİOKSİT KULLANIMI VE HİDROJEN DÖNÜŞÜMÜ İÇİN NİKEL-DEMİR BAZLI KATALİZÖR ÜZERİNDE KARBONDİOKSİTTEN METAN ELDESİ, Postgraduate, B.KAPLAN(Student), 2023
Sarıoğlan 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
Sarıoğlan A., Bilgin Şimşek E., Development of zinc titanate-based H_2S 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., Sarıoğlan 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., Sarıoğlan 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., Sarıoğlan 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., Sarıoğlan 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**
Tuptup M., KAYAMAN APOHAN N., Ozkara-Sarioglan S., Unveren E., Atac O., Sarıoğlan 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., Sarıoğlan 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 syngasclean-up**
Tuna O., Simsek E. B., Sarloglan A., DurakCetin 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.
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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 CaC 2 on the activity of MFI-supported molybdenum catalysts for the aromatization of methane**

Sarioglan 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**
Sarioglan 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 Köroğlu H., Sarioğlan A., Tatlıer M., Erdem-Şenatalar A., Tunç Savaşçi 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 Savaşçi Ö., Mikailov R., Shakhtakhtinsky T., Sarioğlan A., Poladly P., Kuliyev 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**
Sarıoğlan 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**
Şakoğlu P., Fallahi Y., Okur O., Sarıoğlan A., Atakül H., Gür G. G.
30th European Biomass Conference and Exhibition, EUBCE 2022, Virtual, Online, 9 - 12 May 2022, pp.1082-1087

Patent

Sarıoğlan 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

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