

Kişisel Bilgiler

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Uluslararası Araştırmacı ID'leri

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Publons / Web Of Science ResearcherID: AAV-4627-2020

ScopusID: 56473388200

Yoksis Araştırmacı ID: 297974

Eğitim Bilgileri

Post Doktora, Kyushu University, Mühendislik Fakültesi , Makina Mühendisliği, Japonya 2017 - 2019

Doktora, Kyushu University, Fen Bilimleri Enstitüsü, Hidrojen Enerji Sistemleri, Japonya 2014 - 2017

Yüksek Lisans, Universitaet Ulm, Doğal Bilimler Fakültesi, Enerji Bilim ve Teknolojisi, Almanya 2011 - 2013

Lisans, Selçuk Üniversitesi, Mühendislik-Mimarlık Fakültesi, Makina Mühendisliği , Türkiye 2005 - 2011

Yabancı Diller

İngilizce, C1 İleri

Yaptığı Tezler

Doktora, Elaboration of spatial current and temperature variations in microtubular solid oxide fuel cells by experimental and numerical techniques, Kyushu University, Graduate School of Engineering, Hydrogen Energy Systems, 2017

Araştırma Alanları

Enerji, Enerji depolama teknolojileri, Hidrojen teknolojileri ve yakıt hücreleri, Termodinamik, Isı ve Madde Transferi, Yakıtlar ve Yanma , Hesaplamalı akışkanlar dinamiği

Akademik Unvanlar / Görevler

Dr. Öğr. Üyesi, Karadeniz Teknik Üniversitesi, Mühendislik Fakültesi, Makine Mühendisliği, 2021 - Devam Ediyor

Dr. Öğr. Üyesi, Abdullah Gül Üniversitesi, Mühendislik Fakültesi, Makine Mühendisliği, 2019 - 2021

Akademik İdari Deneyim

Verdiği Dersler

Mühendislik Termodinamiği - II, Lisans, 2021 - 2022

Isı Tranferi, Lisans, 2021 - 2022

Akışkanlar Mekaniği, Lisans, 2021 - 2022

Isı İletimi, Doktora, 2021 - 2022

SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

- I. **Comprehensive numerical investigations on direct ammonia-fed planar solid oxide fuel cell**
AYDIN Ö.
Fuel, cilt.378, 2024 (SCI-Expanded)
- II. **Thermal stresses in SOFC stacks: the role of mismatch among thermal conductivity of adjacent components**
AYDIN Ö., Matsumoto G., Shiratori Y.
TURKISH JOURNAL OF CHEMISTRY, cilt.45, sa.3, ss.719-736, 2021 (SCI-Expanded)
- III. **Performance and Durability of One-Cell Module of Biogas-Utilizing SOFC Equipped with Graded Indirect Internal Reformer**
AYDIN Ö., Matsumoto G., Kubota A., Dang Long Tran D. L. T., Sakamoto M., Shiratori Y.
JOURNAL OF THE ELECTROCHEMICAL SOCIETY, cilt.167, sa.6, 2020 (SCI-Expanded)
- IV. **Mass transport limitation in inlet periphery of fuel cells: Studied on a planar Solid Oxide Fuel Cell**
AYDIN Ö., Ochiai T., Nakajima H., Kitahara T., Ito K., Ogura Y., Shimano J.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, cilt.43, sa.36, ss.17420-17430, 2018 (SCI-Expanded)
- V. **Designing graded catalytic domain to homogenize temperature distribution while dry reforming of CH₄**
AYDIN Ö., Kubota A., Dang Long Tran D. L. T., Sakamoto M., Shiratori Y.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, cilt.43, sa.36, ss.17431-17443, 2018 (SCI-Expanded)
- VI. **Concentration Gradient of Reactants Extending from Reaction Sites Inward Inlet Periphery of Fuel Cells**
AYDIN Ö., Nakajima H.
JOURNAL OF THE ELECTROCHEMICAL SOCIETY, cilt.165, sa.5, 2018 (SCI-Expanded)
- VII. **Reliability of the numerical SOFC models for estimating the spatial current and temperature variations**
AYDIN Ö., Nakajima H., Kitahara T.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, cilt.41, sa.34, ss.15311-15324, 2016 (SCI-Expanded)
- VIII. **Processes Involving in the Temperature Variations in Solid Oxide Fuel Cells In-Situ Analyzed through Electrode-Segmentation Method**
AYDIN Ö., Nakajima H., Kitahara T.
JOURNAL OF THE ELECTROCHEMICAL SOCIETY, cilt.163, sa.3, 2016 (SCI-Expanded)
- IX. **Current and temperature distributions in-situ acquired by electrode-segmentation along a microtubular solid oxide fuel cell operating with syngas**
AYDIN Ö., Nakajima H., Kitahara T.
JOURNAL OF POWER SOURCES, cilt.293, ss.1053-1061, 2015 (SCI-Expanded)
- X. **Challenges Associated with Measuring the Intrinsic Electrical Conductivity of Carbon Paper Diffusion Media**
AYDIN Ö., Zedda M., Zamel N.

FUEL CELLS, cilt.15, sa.3, ss.537-544, 2015 (SCI-Expanded)

XI. In-situ diagnosis and assessment of longitudinal current variation by electrode-segmentation method in anode-supported microtubular solid oxide fuel cells

AYDIN Ö., Koshiyama T., Nakajima H., Kitahara T.

JOURNAL OF POWER SOURCES, cilt.279, ss.218-223, 2015 (SCI-Expanded)

Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar

- I. **Relationship Among Thermal Stresses and Thermal Conductivity of Stack Materials in SOFCs**
AYDIN Ö.
World Online Conference on Sustainable Technologies (WOCST), Pisa, İtalya, 17 - 19 Mart 2021
- II. **Indirect internal reforming SOFC accommodating graded-catalytic domain fabricated by paper-structured catalyst**
AYDIN Ö., Matsumoto G., Kubota A., Tran D., Sakamoto M., Shiratori Y.
16th International Symposium on Solid Oxide Fuel Cells, SOFC 2019, Kyoto, Japonya, 8 - 13 Eylül 2019, cilt.91, ss.1631-1640
- III. **Development of a Compact SOFC Module with Paper-structured Catalyst**
Matsumoto G., AYDIN Ö., Sakamoto M., Sasaki K., Shiratori Y.
The 27th SOFC Symposium in Japan, Tokyo, Japonya, 13 - 14 Aralık 2018
- IV. **Onset of Mass Transport Limitation in Inlet Periphery of Fuel Cells**
AYDIN Ö., Nakajima H., Kitahara T., Ito K., Ogura Y., Shimano J.
HYPOTHESIS XIII (Hydrogen Power Theoretical and Engineering Solutions International Symposium), Singapore, Singapur, 24 - 27 Temmuz 2018
- V. **Functionally-Graded Catalytic Domain for Homogenizing Temperature Distribution Along a Plate-Type Dry CH₄ Reformer**
AYDIN Ö., Kubota A., Tran D. L., Sakamoto M., Shiratori Y.
HYPOTHESIS XIII (Hydrogen Power Theoretical and Engineering Solutions International Symposium), Singapore, Singapur, 24 - 27 Temmuz 2018
- VI. **Development of Plate-type Reformer for Downsizing and Power Enhancement of SOFC**
Kubota A., Tran D. L., AYDIN Ö., Sakamoto M., Sasaki K., Shiratori Y.
The 85th Electrochemical Society of Japan (ECSJ) Spring Meeting, Tokyo, Japonya, 9 - 11 Mart 2018
- VII. **Concentration Gradient of Reactants in Fuel Cells Extending from Reaction Sites Inward the Inlet Periphery**
AYDIN Ö., Nakajima H., Kitahara T.
European Fuel Cells Conference Exhibition (EFC17), Naples, İtalya, 12 - 15 Aralık 2017
- VIII. **Reliability of Numerical SOFC Tools for Computing Spatial Current and Temperature Variations**
AYDIN Ö., Nakajima H., Kitahara T.
2nd International Hydrogen Technologies Congress, Adana, Türkiye, 15 - 18 Mart 2017
- IX. **In Situ Measured Spatial Temperature Variations for Improving Reliability of Numerical SOFC Tools**
AYDIN Ö., Nakajima H., Kitahara T.
15th International Symposium on Solid Oxide Fuel Cells (SOFC), Florida, Amerika Birleşik Devletleri, 23 - 28 Temmuz 2017, cilt.78, ss.2191-2201
- X. **Contributions to the Spatial Temperature Variations Emerging in SOFCs Elucidated via Combining Experimental and Numerical Techniques**
AYDIN Ö., Nakajima H., Kitahara T.
2016 Asian SOFC Symposium, Tokyo, Japonya, 4 - 07 Eylül 2016
- XI. **Accuracy of the Numerically Computed Spatial Current and Temperature Variations in SOFCs**
AYDIN Ö., Nakajima H., Kitahara T.
12th European SOFC SOE Forum 2016, Lucerne, İsviçre, 5 - 08 Temmuz 2016
- XII. **Influence of convective heat transfer by air flow on local current/temperatures along microtubular**

solid oxide fuel cells in-situ identified by electrode-segmentation method for Co- and counter-flow configurations

Aydin Ö., Nakajima H., Kitahara T.

14th International Symposium on Solid Oxide Fuel Cells, SOFC 2015; held as part of the Electrochemical Society, ECS Conference on Electrochemical Energy Conversion and Storage, Glasgow, Birleşik Krallık, 26 - 31 Temmuz 2015, cilt.68, ss.2141-2150

XIII. Experimental Evaluation of Internal Hydrocarbon Reforming Reaction in Microtubular SOFCs by Segmentation Method

AYDIN Ö., Koshiyama T., Nakajima H., Kitahara T.

The 55th Battery Symposium in Japan, Kyoto, Japonya, 19 - 21 Kasım 2014

XIV. Comprehensive understanding of electrical conductivity measurements of gas diffusion media of PEM fuel cells

Aydin Ö., Zedda M., Zamel N., Groos U., Hebling C.

20th World Hydrogen Energy Conference, WHEC 2014, Gwangju, Güney Kore, 15 - 20 Haziran 2014, cilt.1, ss.474-478

Desteklenen Projeler

AYDIN Ö., CORA Ö. N., VAROL T., ÇUHADAROĞLU B., BALI T., Yükseköğretim Kurumları Destekli Proje, Yakıt Pili Test Sistemi Kurulumu, 2021 - 2023

Aydın Ö., Shiratori Y., Diğer Ülkelerdeki Kamu Kurumları Tarafından Desteklenmiş Proje, STUDY ON HEAT RECOVERY PROCESS WITHIN ANODE FOR DOWNSIZING FUEL CELL MODULE, 2017 - 2020

Aydın Ö., Kitahara T., Diğer Ülkelerdeki Kamu Kurumları Tarafından Desteklenmiş Proje, SELF-STANDING SOLID OXIDE FUEL CELL INVOLVING A NOVEL REFORMING STRUCTURE FOR HYDROCARBON FUELS, 2017 - 2019

Metrikler

Yayın: 25

Atf (WoS): 89

Atf (Scopus): 94

H-İndeks (WoS): 6

H-İndeks (Scopus): 6

Kongre ve Sempozyum Katılımı Faaliyetleri

World Online Community for Sustainable Technologies, Katılımcı, Florence, İtalya, 2022

Burslar

Fulbright Doktora Sonrası Araştırma Bursu, Fulbright Programı, 2022 - 2023

JSPS Postdoctoral Fellowship for Overseas Researchers, Yabancı Ülkelerin Resmi Kurumları, 2017 - 2019

MEXT Scholarship (Monbukagakusho), Yabancı Ülkelerin Resmi Kurumları, 2015 - 2017

TEV-DAAD Müşterek Almanya Yüksek Lisans Bursu , Vakıf, 2011 - 2013

Akademi Dışı Deneyim

Şirket, Dal Teknik Makina A.Ş., AR&GE Merkezi

DAL TEKNİK MAKİNA TİCARET VE SANAYİ ANONİM ŞİRKETİ

Fraunhofer ISE (Araştırma Enstitüsü-Almanya)

Fraunhofer IWM (Araştırma Enstitüsü-Almanya)