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Personal Information

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Address: ANKARA YILDIRIM BEYAZIT ÜNİVERSİTESİ Mühendislik ve Doğa Bilimleri Fakültesi Makine Mühendisliği Bölümü 15 Temmuz Şehitleri Yerleşkesi Ayvalı Mah. Gazze Cad. 150. Sokak, Antares AVM Yanı, A-Blok Kat:5 Oda No:A513 Etlik, Keçiören /ANKARA

Education Information

Doctorate, Gazi University, Fen Bilimleri Enstitüsü, Turkey 2009 - 2013

Postgraduate, Nigde Omer Halisdemir University, Institute Of Science, Turkey 2007 - 2009

Undergraduate, Nigde Omer Halisdemir University, Faculty Of Engineering, Department Of Mechanical Engineering, Turkey 2002 - 2006

Dissertations

Doctorate, INVESTIGATION OF ELECTRODE/ELECTROLYTE INTERFACE DYNAMICS OF SOLID OXIDE FUEL CELLS, Gazi University, Fen Bilimleri Enstitüsü, 2013

Postgraduate, Numerical Investigation of Two Phase Flow in Direct Methanol Fuel Cell, Nigde Omer Halisdemir University, Institute Of Science, 2009

Research Areas

Hydrogen Technologies and Fuel Cells

Academic Titles / Tasks

Associate Professor, Nigde Omer Halisdemir University, Faculty Of Engineering, Department Of Mechanical Engineering, 2017 - 2022

Academic and Administrative Experience

Deputy Head of Department, Nigde Omer Halisdemir University, Faculty Of Engineering, Department Of Mechanical Engineering, 2017 - 2022

Assistant Manager of Research and Application Center, Nigde Omer Halisdemir University, 2014 - 2022

Courses

Fuel Cell Technologies, Undergraduate, 2021 - 2022

Advising Theses

- Çelik S., Doğrudan metanol yakıt pilleri için elektrokimyasal metanol sensörü geliştirilmesi, Postgraduate, N.ÇUHADAR(Student), 2021
- Çelik S., PEM yakıt pilleri için düşük ağırlıklı akış plakası geliştirilmesi, Postgraduate, K.KARACAN(Student), 2019
- Çelik S., Orta sıcaklıklarda çalışan katı oksit yakıt pilleri için anot/katot elektrotların geliştirilmesi, Postgraduate, S.EVCİMEN(Student), 2019
- Çelik S., Zan R., Katkılı grafen sentezi ve karakterizasyonu, Postgraduate, A.ALTUNTEPE(Student), 2019
- Çelik S., QCM sensörlerinin zehirli gazlara karşı algılama özelliklerinin incelenmesi, Postgraduate, E.ÇELİK(Student), 2019
- Çelik S., Metal destekli katı oksit yakıt hücresi geliştirilmesi, Postgraduate, M.TANER(Student), 2017
- Çelik S., Düşük irtifa insansız hava araçları için 150 watt'lık PEM yakıt pili sistemi geliştirilmesi, Postgraduate, M.GÖREN(Student), 2015

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

- I. **Tape casting coupled with isostatic pressing as an alternative fabrication method for microtubular solid oxide fuel cells**
Altan T., Timurkutluk C., Timurkutluk B., Celik S.
International Journal of Hydrogen Energy, vol.47, no.16, pp.9735-9743, 2022 (Journal Indexed in SCI Expanded)
- II. **Determination of methanol concentration for DMFC systems by fuel cell-based sensor**
ÇELİK S., Cuhadar N., Yagiz M.
Fuel Cells, 2022 (Journal Indexed in SCI Expanded)
- III. **Engineering solid oxide fuel cell electrode microstructure by a micro-modeling tool based on estimation of TPB length**
Timurkutluk B., Altan T., Toros S., Genc O., Celik S., Korkmaz H. G.
International Journal of Hydrogen Energy, vol.46, no.24, pp.13298-13317, 2021 (Journal Indexed in SCI Expanded)
- IV. **Investigation of external compression in scaling up of planar solid oxide fuel cells**
Onbilgin S., Timurkutluk C., Timurkutluk B., Celik S.
International Journal of Hydrogen Energy, 2021 (Journal Indexed in SCI Expanded)
- V. **Investigation of formability of metallic bipolar plates via stamping for light-weight PEM fuel cells**
Karacan K., Celik S., Toros S., Alkan M., Aydin U.
International Journal of Hydrogen Energy, vol.45, no.60, pp.35149-35161, 2020 (Journal Indexed in SCI Expanded)
- VI. **Comparison of electrolyte fabrication techniques on the performance of anode supported solid oxide fuel cells**
Onbilgin S., Timurkutluk B., Timurkutluk C., Celik S.
International Journal of Hydrogen Energy, vol.45, no.60, pp.35162-35170, 2020 (Journal Indexed in SCI Expanded)
- VII. **Effect of surface roughness of the metallic interconnects on the bonding strength in solid oxide fuel cells**
Altan T., Celik S.
International Journal of Hydrogen Energy, vol.45, no.60, pp.35118-35129, 2020 (Journal Indexed in SCI Expanded)
- VIII. **Glass fiber reinforced sealants for solid oxide fuel cells**
Timurkutluk B., Altan T., Celik S., Timurkutluk C., PALACI Y.
International Journal of Hydrogen Energy, vol.44, no.33, pp.18308-18318, 2019 (Journal Indexed in SCI Expanded)
- IX. **Effects of solid loading on joining and thermal cycling performance of glass-ceramic sealing pastes for solid oxide fuel cells**

Timurkutluk B., Celik S., Ucar E.

Ceramics International, vol.45, no.10, pp.12845-12850, 2019 (Journal Indexed in SCI Expanded)

- X. **Influence of doctor blade gap on the properties of tape cast NiO/YSZ anode supports for solid oxide fuel cells**
Timurkutluk B., Celik S., Ucar E.
Ceramics International, vol.45, no.3, pp.3192-3198, 2019 (Journal Indexed in SCI Expanded)
- XI. **Investigation of temperature distribution and performance of SOFC short stack with/without machined gas channels**
Canavar M., Mat A., Celik S., Timurkutluk B., Kaplan Y.
International Journal of Hydrogen Energy, vol.41, no.23, pp.10030-10036, 2016 (Journal Indexed in SCI Expanded)
- XII. **Optimum processing parameters to improve sealing performance in solid oxide fuel cells**
Ertugrul T. Y. , Celik S., Mat M. D.
Ceramics International, vol.41, no.8, pp.9834-9842, 2015 (Journal Indexed in SCI Expanded)
- XIII. **Mechanical and electrochemical behavior of novel electrolytes based on partially stabilized zirconia for solid oxide fuel cells**
Celik S., Timurkutluk B., Toros S., Timurkutluk C.
Ceramics International, vol.41, no.7, pp.8785-8790, 2015 (Journal Indexed in SCI Expanded)
- XIV. **Micro level two dimensional stress and thermal analysis anode/electrolyte interface of a solid oxide fuel cell**
Celik S., Ibrahimoglu B., Mat M. D. , Kaplan Y., Veziroglu T. N.
International Journal of Hydrogen Energy, vol.40, no.24, pp.7895-7902, 2015 (Journal Indexed in SCI Expanded)
- XV. **Influential parameters and performance of a glass-ceramic sealant for solid oxide fuel cells**
Celik S.
Ceramics International, vol.41, no.2, pp.2744-2751, 2015 (Journal Indexed in SCI Expanded)
- XVI. **Three dimensional stress analysis of solid oxide fuel cell anode micro structure**
Celik S., Ibrahimoglu B., Toros S., Mat M. D.
International Journal of Hydrogen Energy, vol.39, no.33, pp.19119-19131, 2014 (Journal Indexed in SCI Expanded)
- XVII. **Measurement of the temperature distribution in a large solid oxide fuel cell short stack**
Celik S., Timurkutluk B., Mat M. D.
International Journal of Hydrogen Energy, vol.38, no.25, pp.10534-10541, 2013 (Journal Indexed in SCI Expanded)
- XVIII. **Effect of binder burnout on the sealing performance of glass ceramics for solid oxide fuel cells**
Ertugrul T. Y. , Celik S., Mat M. D.
Journal of Power Sources, vol.242, pp.775-783, 2013 (Journal Indexed in SCI Expanded)
- XIX. **Effects of electrolyte pattern on mechanical and electrochemical properties of solid oxide fuel cells**
Timurkutluk B., Celik S., Toros S., Timurkutluk C., Mat M. D. , Kaplan Y.
Ceramics International, vol.38, no.7, pp.5651-5659, 2012 (Journal Indexed in SCI Expanded)
- XX. **Novel electrolytes for solid oxide fuel cells with improved mechanical properties**
Timurkutluk B., Celik S., Timurkutluk C., Mat M. D. , Kaplan Y.
International Journal of Hydrogen Energy, vol.37, no.18, pp.13499-13509, 2012 (Journal Indexed in SCI Expanded)
- XXI. **Novel structured electrolytes for solid oxide fuel cells**
Timurkutluk B., Celik S., Timurkutluk C., Mat M. D. , Kaplan Y.
Journal of Power Sources, vol.213, pp.47-54, 2012 (Journal Indexed in SCI Expanded)
- XXII. **Measurement and estimation of species distribution in a direct methanol fuel cell**
Celik S., Mat M. D.
International Journal of Hydrogen Energy, vol.35, no.5, pp.2151-2159, 2010 (Journal Indexed in SCI Expanded)

Articles Published in Other Journals

- I. **Thermomechanical analysis of porous solid oxide fuel cell by using peridynamics**
Wang H., Oterkus E., Celik S., Toros S.
AIMS Energy, vol.5, no.4, pp.585-600, 2017 (Refereed Journals of Other Institutions)

Awards

- Çelik S., Timurkutluk B., Kaplan Y., YÖK (Council of Higher Education, Turkey) Outstanding Achievement Awards, Yüksek Öğretim Kurumu, October 2018
- Çelik S., Publication Incentive Award, Niğde Ömer Halisdemir Üniversitesi, March 2016
- Çelik S., 3rd Prize in Applications for Energy Generation, Transmission and Distribution, Tet Ar-Ge Proje Pazarı 3, March 2014
- Çelik S., Incentive Award, Niğde Ömer Halisdemir Üniversitesi, March 2013
- Çelik S., Project Promising Highest Commercial Potential Award, I. Yenilikçi Ankara Proje Pazarı, December 2012
- Çelik S., Department First Rank and Faculty Third Rank, Niğde Ömer Halisdemir Üniversitesi, May 2006