

Personal Information

Email: sirmak@cu.edu.tr

Web: <https://avesis.cu.edu.tr//sirmak>

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Evaluation of hardwood or softwood bark biomass as feed materials for aqueous-phase reforming gasification process**
Meryemoğlu B., Ozsel B. K., Irmak S.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.53, no.53, pp.1044-1051, 2024 (SCI-Expanded)
- II. **Production of activated carbon materials from kenaf biomass to be used as catalyst support in aqueous-phase reforming process**
MERYEMOĞLU B., Irmak S., HASANOĞLU A.
FUEL PROCESSING TECHNOLOGY, vol.151, pp.59-63, 2016 (SCI-Expanded)
- III. **A new approach for high-yield hydrogen production: Atmospheric pressure vapour-phase catalytic reforming of biomass hydrolysate**
HASANOĞLU A., MERYEMOĞLU B., Irmak S., Kurtuluş M., ERBATUR O.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.41, no.30, pp.12880-12887, 2016 (SCI-Expanded)
- IV. **Improving activity of Pt supported metal catalysts by changing reduction method of Pt precursor for hydrogen production from biomass**
Irmak S., MERYEMOĞLU B., OZSEL B. K., HASANOĞLU A., ERBATUR O.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.40, no.43, pp.14826-14832, 2015 (SCI-Expanded)
- V. **Developing Pt based bimetallic and trimetallic carbon supported catalysts for aqueous-phase reforming of biomass-derived compounds**
Kaya B., IRMAK S., HASANOĞLU A., ERBATUR O.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.40, no.10, pp.3849-3858, 2015 (SCI-Expanded)
- VI. **Does reduced or non-reduced biomass feed produce more gas in aqueous-phase reforming process?**
IRMAK S., MERYEMOĞLU B., HASANOĞLU A., ERBATUR O.
FUEL, vol.139, pp.160-163, 2015 (SCI-Expanded)
- VII. **Influence of particle size of support on reforming activity and selectivity of activated carbon supported platinum catalyst in APR**
Meryemoglu B., IRMAK S., HASANOĞLU A., ERBATUR O., Kaya B.
FUEL, vol.134, pp.354-357, 2014 (SCI-Expanded)
- VIII. **Evaluation of various carbon materials supported Pt catalyts for aqueous-phase reforming of lignocellulosic biomass hydrolysate**
Kaya B., IRMAK S., HASANOĞLU A., ERBATUR O.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.39, no.19, pp.10135-10140, 2014 (SCI-Expanded)
- IX. **Hydrogen production from aqueous-phase reforming of sorghum biomass: An application of the response surface methodology**
Meryemoglu B., HASANOĞLU A., Kaya B., IRMAK S., ERBATUR O.
RENEWABLE ENERGY, vol.62, pp.535-541, 2014 (SCI-Expanded)
- X. **Biofuel production by liquefaction of kenaf (Hibiscus cannabinus L.) biomass**
Meryemoglu B., HASANOĞLU A., IRMAK S., ERBATUR O.
BIORESOURSE TECHNOLOGY, vol.151, pp.278-283, 2014 (SCI-Expanded)

- XI. **Gasification efficiencies of cellulose, hemicellulose and lignin fractions of biomass in aqueous media by using Pt on activated carbon catalyst**
IRMAK S., Kurtulus M., Hasanoglu (Hesenov) A., ERBATUR O.
BIOMASS & BIOENERGY, vol.49, pp.102-108, 2013 (SCI-Expanded)
- XII. **Preparation of activated carbon supported Pt catalysts and optimization of their catalytic activities for hydrogen gas production from the hydrothermal treatment of biomass-derived compounds**
Meryemoglu B., IRMAK S., Hesenou A., ERBATUR O.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.37, no.23, pp.17844-17852, 2012 (SCI-Expanded)
- XIII. **Effect of support materials on supported platinum catalyst prepared using a supercritical fluid deposition technique and their catalytic performance for hydrogen-rich gas production from lignocellulosic biomass**
Kaya B., IRMAK S., Hesenov A., ERBATUR O., Erkey C.
BIORESOURCING TECHNOLOGY, vol.123, pp.723-726, 2012 (SCI-Expanded)
- XIV. **Comparison of batch aqueous-phase reforming of glycerol and lignocellulosic biomass hydrolysate**
Meryemoglu B., Kaya B., IRMAK S., Hesenov A., ERBATUR O.
FUEL, vol.97, pp.241-244, 2012 (SCI-Expanded)
- XV. **Electrolysis of coal slurries to produce hydrogen gas: Relationship between CO₂ and H₂ formation**
Hesenov A., KINIK H., PULL G., Gozmen B., IRMAK S., ERBATUR O.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.36, no.9, pp.5361-5368, 2011 (SCI-Expanded)
- XVI. **Hydrolysis of kenaf (*Hibiscus cannabinus* L.) stems by catalytical thermal treatment in subcritical water**
ÖZTÜRK I., IRMAK S., Hesenov A., ERBATUR O.
BIOMASS & BIOENERGY, vol.34, no.11, pp.1578-1585, 2010 (SCI-Expanded)
- XVII. **Phenolics in the bran of waxy wheat and triticale lines**
Jonnala R. S., Irmak S., MacRitchie F., Bean S. R.
JOURNAL OF CEREAL SCIENCE, vol.52, no.3, pp.509-515, 2010 (SCI-Expanded)
- XVIII. **Aqueous-phase reforming of biomass using various types of supported precious metal and raney-nickel catalysts for hydrogen production**
MERYEMOĞLU B., Hesenov A., IRMAK S., ATANUR O. M., ERBATUR O.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.35, no.22, pp.12580-12587, 2010 (SCI-Expanded)
- XIX. **Study on the stability of supercritical fluid extracted rosemary (*Rosmarinus officinalis* L.) essential oil**
IRMAK S., SOLAKYILDIRIM K., Hesenov A., ERBATUR O.
JOURNAL OF ANALYTICAL CHEMISTRY, vol.65, no.9, pp.899-906, 2010 (SCI-Expanded)
- XX. **Hydrogen rich gas production by thermocatalytic decomposition of kenaf biomass**
IRMAK S., Ozturk I.
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.35, no.11, pp.5312-5317, 2010 (SCI-Expanded)
- XXI. **Correlation Between Boron Contents of Soils and Wheat Plants (*Triticum* spp.) in The Cukurova Plain in Turkey**
Irmak S., Vapur H.
ASIAN JOURNAL OF CHEMISTRY, vol.21, no.4, pp.2615-2624, 2009 (SCI-Expanded)
- XXII. **Effect of heat stress on wheat proteins during kernel development in wheat near-isogenic lines differing at Glu-D1**
Irmak S., Naeem H. A., Lookhart G. L., MacRitchie F.
JOURNAL OF CEREAL SCIENCE, vol.48, no.2, pp.513-516, 2008 (SCI-Expanded)
- XXIII. **Effect of genetic variation on phenolic acid and policosanol contents of Pegaso wheat lines**
Irmak S., Jonnala R. S., MacRitchie F.
JOURNAL OF CEREAL SCIENCE, vol.48, no.1, pp.20-26, 2008 (SCI-Expanded)
- XXIV. **Degradation of alkylphenolic compounds in aqueous media by Fenton and ultraviolet induced fenton reaction**
Irmak S., Erbatur O., Kusvuran E.

FRESENIUS ENVIRONMENTAL BULLETIN, vol.15, pp.1601-1606, 2006 (SCI-Expanded)

XXV. Comparison of several advanced oxidation processes for the decolorization of Reactive Red 120 azo dye in aqueous solution

Kusvuran E., Gulnaz O., Irmak S., Atanur O., Yavuz H., Erbatur O.

JOURNAL OF HAZARDOUS MATERIALS, vol.109, pp.85-93, 2004 (SCI-Expanded)

Articles Published in Other Journals

I. Investigation of Organic Solvents Effects on Kenaf (*Hibiscus cannabinus* L.) Biomass Conversion in Subcritical Water

MERYEMOĞLU B., HASANOĞLU A., KURTULUŞ M., IRMAK S.

Journal of the Turkish Chemical Society, Section A: Chemistry, pp.1423-1430, 2018 (Scopus)

II. Correlation of manganese contents of soils and wheat plants (*Triticum spelta*) in the Cukurova Region of Turkey.

IRMAK S., Vapur H.

Pakistan journal of biological sciences : PJBS, vol.11, pp.2331-5, 2008 (Scopus)

Refereed Congress / Symposium Publications in Proceedings

I. Comparison of activated carbon supported metal catalyst efficiencies of biomass hydrolysates for hydrogen gas production

MERYEMOĞLU B., KURTULUŞ M., FAKI E., HASANOĞLU A., IRMAK S.

14th International Conference on Energy Storage, 25 - 28 April 2018

II. Influence of type of carbon support on the reforming activity and selectivity of supported Pt catalysts for APR of glucose

OZSEL B. K., MERYEMOĞLU B., Kurtulus M., HASANOĞLU A., IRMAK S.

The 6th Catalysis Conference, Bursa, Turkey, 27 April 2017 - 30 April 2016, pp.102

III. Effect of Temperature on Catalytic Gasification of Biomass for Hydrogen Production

MERYEMOĞLU B., KURTULUŞ M., DEMİRCİ İ., HASANOĞLU A., IRMAK S.

2. Uluslararası Hidrojen Teknolojileri Kongresi, 15 - 18 March 2017

IV. Low Temperature-Steam Phase Catalytic Gasification of Biomass Hydrolysates

HASANOĞLU A., MERYEMOĞLU B., demirci İ., IRMAK S.

2. Uluslararası Hidrojen Teknolojileri Kongresi, 15 - 18 March 2017

V. The Effect of Organic Solvents On Biomass Hydrolysis

Kurtulus M., MERYEMOĞLU B., HASANOĞLU A., IRMAK S.

The 1th International Mediterranean Science and Engineering Congress (IMSEC 2016), Adana, Turkey, 26 - 28 October 2016, pp.2334

VI. Comparison of solubilization efficiencies of perennial grasses and agricultural biomass residues in subcritical water for high yielding hydrogen gas production

IRMAK S., MERYEMOĞLU B.

ASABE Annual International Meeting, 17 - 20 July 2016

VII. Xylitol production from corn biomass residues

CANISAG H., VOKOUN C., MERYEMOĞLU B., IRMAK S.

Corn Utilization Technology Conference, 6 - 08 June 2016

VIII. THE EFFECT OF PEROXIDE ON BIOMASS HYDROLYSIS AND CATALYTIC GASIFICATION OF HYDROLYSATES

Kurtulus M., MERYEMOĞLU B., HASANOĞLU A., IRMAK S.

The 6th Catalysis Conference, Turkey, 27 - 30 April 2016

IX. Preparation supported Pt and Ru catalysts and their performances in AVPR Process

- MERYEMOĞLU B., KURTULUŞ M., HASANOĞLU A., IRMAK S.
The 6th Catalysis Conference, Turkey, 27 - 30 April 2016
- X. **The effect of peroxide on biomass hydrolysis and catalytic gasification on hydrolysates**
KURTULUŞ M., MERYEMOĞLU B., HASANOĞLU A., IRMAK S.
The 6th Catalysis Conference, Turkey, 27 - 30 April 2016
- XI. **LİGNOSELÜLOZİK BİYOKÜTLE HİDROLİZATLARININ GAZLAŞTIRILMASINDA KULLANILMAK ÜZERE AKTİF KATALİZÖR GELİŞTİRİLMESİ**
MERYEMOĞLU B., IRMAK S., HASANOĞLU A., ERBATUR O.
5. Ulusal Kataliz Kongresi, Turkey, 23 - 26 April 2016
- XII. **Evaluation of Activity of Prepared Activated Carbon Supported Pt Catalysts for Gasification of Biomass Hydrolysates**
BAHAR M., IRMAK S., HASANOĞLU A., MEHTAP K., SEÇER ATEŞ A., OKTAY E.
International Porous Powder Material September 15-18, İzmir-Çeşme, Turkey, 15 - 18 September 2015
- XIII. **EFFECT OF MICROWAVE PRE-TREATMENT ON THE SOLUBILIZATION OF LIGNOCELLULOSIC BIOMASS IN SUBCRITICAL WATER FOR PRODUCTION OF BIOFUELS AND BIOPRODUCTS**
IRMAK S., MERYEMOĞLU B., SANDIP A., SUBBIAH J., SARATH G.
UNL Biofuels and Bioproducts Symposium, 18 September 2015
- XIV. **BİYOKÜTLEDEN SULU ORTAMDA HİDROJEN ZENGİN GAZ KARIŞIMI ELDE ETMEK İÇİN AKTİF KARBON DESTEKLİ PLATİN KATALİZÖRLERİN GELİŞTİRİLMESİ**
MERYEMOĞLU B., IRMAK S., HASANOĞLU A., ERBATUR O.
VI. ULUSAL ANALİTİK KİMYA KONGRESİ, Turkey, 3 - 07 September 2012
- XV. **SULU FAZ REFORMLAMA YÖNTEMİYLE HİDROJEN GAZI OLUŞTURMADA KULLANILAN KATALİZÖRÜN DESTEK MATERYALİNİN PARTİKÜL BOYUTUNUN ETKİSİ**
MERYEMOĞLU B., KAYA ÖZSEL B., IRMAK S., HASANOĞLU A., ERBATUR O.
VI. Ulusal Analitik Kimya Kongresi, Turkey, 3 - 07 September 2012
- XVI. **Aqueous phase reforming of lignocelulosic biomass for hydrogen gas production**
KURTULUŞ M., IRMAK S., MERYEMOĞLU B., KAYA ÖZSEL B., HASANOĞLU A., ERBATUR O.
18th European Biomass Conference and Exhibition, 3 - 07 May 2010
- XVII. **DEVELOPING AQUEOUS PHASE REFORMING CATALYSTS VIA DOPING PLATINUM ON VARIOUS CARBON MATERIALS FOR HYDROGEN GAS PRODUCTION FROM LIGNOCELLULOSIC HYDROLYSATES**
KAYA ÖZSEL B., MERYEMOĞLU B., HASANOĞLU A., IRMAK S., ERKEY C., ERBATUR O.
Turkish-Japan Joint Carbon Symposium, 18 - 19 March 2010
- XVIII. **Buğday Samanının Farklı Katalizörler Kullanılarak Sulu Faz Reformlama Yöntemi ile Gazlaştırılması**
MERYEMOĞLU B., HASANOĞLU A., IRMAK S., ATANUR O. M., ERBATUR O.
IV. ULUSAL HİDROJEN ENERJİSİ KONGRESİ ve SERGİSİ, Turkey, 15 - 16 October 2009
- XIX. **Hydrolysis of wheat straw biomass via catalytic thermal treatment in subcritical water**
IRMAK S., HASANOĞLU A., OZTURK I., MERYEMOĞLU B., KAYA ÖZSEL B., BALIN T., ERBATUR O.
2008 AACC International Annular Meeting, 21 - 24 September 2008
- XX. **Katalitik ısı ile hidroliz edilen lignoselüloziklerden oluşan ürünlerin boyut dışlama kromatografisi (SEC) ve HPLC ile analizleri**
IRMAK S., HASANOĞLU A., OZTURK I., MERYEMOĞLU B., KAYA ÖZSEL B., BALIN T.
IV. Ulusal Analitik Kimya Kongresi, Turkey, 25 - 27 June 2008
- XXI. **Yumurta Ağırlığı Üzerine Etki Eden Bazı Faktörler.**
KAYAALP G., Irmak S., Şekeroğlu A.
Uluslararası Hayvancılık 799 Kongresi, İzmir, Turkey, 21 - 24 September 1999, pp.35-43

Other Publications

- I. **Ceylanpınar-Viranşehir-Mardin ovaları toprak kaynaklarının temel özellik ve dağılımlarının belirlenmesi ve potansiyel arazi kullanım planlarının hazırlanması**

Dinç U., ŞENOL S., Sayın M., Kapur S., Yeğingil İ., Yeşilsoy M. Ş., Güzel N., GÖK M., Tuli A., Çolak A. K., et al.
Technical Report, pp.1-369, 1991

II. **Adıyaman-Çamgazi ovası detaylı toprak etüdüleri**

GÖK M., Tuli A., Çolak A. K., Karaman C., Aksoy E., Özbek H., Ortas I., Yeğingil İ., Şenol M., Kandırmaz M., et al.
Technical Report, pp.1-176, 1990

Supported Projects

Hasanoğlu A., Tüken T., Irmak S., Erbatır O., TÜBİTAK Project, Mikrobiyal Elektroliz Yönelimiyle Organik Materyalce Zengin Atık Sulardan ve Lignoselülozik Biyokütle Hidroliz Çözümlerinden Hidrojen Gazı Eldesi, 2011 - 2013

Hasanoğlu A., Erbatır O., Irmak S., TÜBİTAK Project, Lignoselülozik Biyokütleden Hidrojen Gazı Elde Etmek için Kesiksiz Sulu Faz Reformlama İşleminin Geliştirilmesi, 2010 - 2011

Hasanoğlu A., Erbatır O., Irmak S., TÜBİTAK Project, Lignoselülozik Biyokütleden Sulu Faz Reformlama ile Hidrojen Eldesi, 2008 - 2010

Metrics

Publication: 50

Citation (WoS): 680

Citation (Scopus): 779

H-Index (WoS): 15

H-Index (Scopus): 17

Non Academic Experience

Kansas State University, Grain Science&Industry, Doktora sonrası araştırmacı

Oklahoma State University, Food and Agricultural Products Research and Technology Center, Doktora sonrası araştırmacı

Texas A&M University, Chemical Engineering, Araştırmacı