

## Prof. HAKAN GAŞAN

### Personal Information

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### International Researcher IDs

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### Education Information

Doctorate, Eskisehir Osmangazi University, Fen Bilimleri Enstitüsü, Metalurji Mühendisliği (Dr), Turkey 2003 - 2008

Postgraduate, Eskisehir Osmangazi University, Fen Bilimleri Enstitüsü, Metalurji Mühendisliği (YI) (Tezli), Turkey 2000 - 2003

Undergraduate, Eskisehir Osmangazi University, Mühendislik-Mimarlık Fakültesi, Metalurji Ve Malzeme Mühendisliği Bölümü, Turkey 1996 - 2000

### Dissertations

Postgraduate, Mekanik Alaşımlandırma Yöntemi ile Al89.2Fe10.8 Üretimi ve Amorf Yapısının İncelenmesi, Eskisehir Osmangazi University, Fen Bilimleri Enstitüsü, Metalurji Mühendisliği (YI) (Tezli), 2003

### Research Areas

Metallurgical and Materials Engineering, Material science and engineering

### Academic Titles / Tasks

Professor, Eskisehir Osmangazi University, Mühendislik-Mimarlık Fakültesi, Metalurji ve Malzeme Müh.Böl., 2020 - Continues

Associate Professor, Eskisehir Osmangazi University, Mühendislik-Mimarlık Fakültesi, Metalurji ve Malzeme Müh.Böl., 2014 - Continues

Assistant Professor, Eskisehir Osmangazi University, Metalurji Enstitüsü, Met.Enst.Md.Lüğü, 2009 - 2014

Research Assistant, Eskisehir Osmangazi University, Metalurji Enstitüsü, Met.Enst.Md.Lüğü, 2000 - 2009

### Academic and Administrative Experience

Eskisehir Osmangazi University, Mühendislik-Mimarlık Fakültesi, 2015 - 2017

Eskisehir Osmangazi University, Metalurji Enstitüsü, 2009 - 2014

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Lubricity assessment of ultra-low sulfur diesel fuel (ULSD), biodiesel, and their blends, in conjunction with pure hydrocarbons and biodiesel based compounds**  
Tat M. E., Çelik O. N., Er Ü., Gaşan H., Ulutan M.  
International Journal of Engine Research, vol.23, no.2, pp.214-231, 2022 (SCI-Expanded)
- II. **New Eutectic High-Entropy Alloys Based on Co-Cr-Fe-Mo-Ni-Al: Design, Characterization and Mechanical Properties**  
GAŞAN H., Ozcan A.  
METALS AND MATERIALS INTERNATIONAL, vol.26, no.8, pp.1152-1167, 2020 (SCI-Expanded)
- III. **Effects of Al on the Phase Volume Fractions and Wear Properties in the Al<sub>x</sub>CoCrFeMoNi High Entropy Alloy System**  
Gaşan H., Lökçü E., Ozcan A., Çelik O. N., Çelikyürek İ., Ulutan M., Kurtulus Y.  
METALS AND MATERIALS INTERNATIONAL, vol.26, no.3, pp.310-320, 2020 (SCI-Expanded)
- IV. **Microstructures and mechanical properties of graphene platelets-reinforced spark plasma sintered tantalum diboride-silicon carbide composites**  
Gurcan K., Inci E., Sackan I., Ayas E., GAŞAN H.  
MATERIALS RESEARCH EXPRESS, vol.6, no.11, 2019 (SCI-Expanded)
- V. **Formation of TaB<sub>2</sub> powders from high energy ball milling and borothermal reduction process**  
Gurcan K., Ayas E., GAŞAN H.  
MATERIALS CHEMISTRY AND PHYSICS, vol.235, 2019 (SCI-Expanded)
- VI. **Effect of Calcium Hexaborate Pentahydrate as a Lubricant Additive in Commercial Engine Oil**  
Ozcan A., Yilmaz D., Koc N., GAŞAN H.  
TRANSACTIONS OF THE INDIAN INSTITUTE OF METALS, vol.72, no.2, pp.327-333, 2019 (SCI-Expanded)
- VII. **Effect of cryogenic treatment on the microstructure and the wear behavior of WC-Co end mills for machining of Ti6Al4V titanium alloy**  
Çelik O. N., Sert A., Gaşan H., Ulutan M.  
INTERNATIONAL JOURNAL OF ADVANCED MANUFACTURING TECHNOLOGY, vol.95, pp.2989-2999, 2018 (SCI-Expanded)
- VIII. **Effect of process variables on the synthesis of MgB<sub>2</sub> by high energy ball mill**  
KURAMA H., Erkus S., GAŞAN H.  
PHYSICOCHEMICAL PROBLEMS OF MINERAL PROCESSING, vol.53, no.2, pp.969-982, 2017 (SCI-Expanded)
- IX. **The effect of process control agent usage on the structural properties of MgB<sub>2</sub> synthesized by high energy ball mill**  
KURAMA H., Erkus S., GAŞAN H.  
CERAMICS INTERNATIONAL, vol.43, 2017 (SCI-Expanded)
- X. **Synthesis of La<sub>2</sub>Ni<sub>7</sub> hydrogen storage alloy by the electro-deoxidation technique**  
ANIK M., BİNAL AYBAR A., Kucukdeveci N., Erken H., BAKSAN B., GAŞAN H., Hatirnaz N. B., LÖKÇÜ E.  
INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.40, no.5, pp.2248-2254, 2015 (SCI-Expanded)
- XI. **Hydrogen storage characteristics of Ti<sub>2</sub>Ni alloy synthesized by the electro-deoxidation technique**  
ANIK M., BAKSAN B., Orbay T. O., Kucukdeveci N., BİNAL AYBAR A., ÖZDEN R. C., GAŞAN H., KOÇ N.  
INTERMETALLICS, vol.46, pp.51-55, 2014 (SCI-Expanded)
- XII. **Effects of a Destabilization Heat Treatment on the Microstructure and Abrasive Wear Behavior of High-Chromium White Cast Iron Investigated Using Different Characterization Techniques**  
GAŞAN H., Erturk F.  
METALLURGICAL AND MATERIALS TRANSACTIONS A-PHYSICAL METALLURGY AND MATERIALS SCIENCE, no.11, pp.4993-5005, 2013 (SCI-Expanded)
- XIII. **Particle Size Distribution and Shape Characterization of the Chips Produced During Granite Machining in Relation to Process Forces and Specific Energy**  
YILMAZ N., Goktan R. M., GAŞAN H., ÇELİK O. N.  
PARTICULATE SCIENCE AND TECHNOLOGY, vol.31, no.3, pp.277-286, 2013 (SCI-Expanded)
- XIV. **Effect of V, Nb, Ti and graphite additions on the hydrogen desorption temperature of magnesium**

## hydride

GAŞAN H., ÇELİK O. N., Aydinbeyli N., Yaman Y. M.

INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.37, no.2, pp.1912-1918, 2012 (SCI-Expanded)

- XV. **Effects of graphite content on the microstructure and wear properties of an AISI 8620 steel surface modified by tungsten inert gas (TIC)**

ÇELİK O. N., ULUTAN M., GAŞAN H., ER Ü., BUYTOZ S.

SURFACE & COATINGS TECHNOLOGY, vol.206, no.6, pp.1423-1429, 2011 (SCI-Expanded)

- XVI. **Effect of Different Surface Treatment Methods on the Friction and Wear Behavior of AISI 4140 Steel**  
ULUTAN M., ÇELİK O. N., GAŞAN H., ER Ü.

JOURNAL OF MATERIALS SCIENCE & TECHNOLOGY, vol.26, no.3, pp.251-257, 2010 (SCI-Expanded)

- XVII. **The dependence of the hydrogen desorption temperature of MgH<sub>2</sub> on its structural and morphological characteristics**

GAŞAN H., Aydinbeyli N., ÇELİK O. N., Yaman Y. M.

JOURNAL OF ALLOYS AND COMPOUNDS, vol.487, pp.724-729, 2009 (SCI-Expanded)

- XVIII. **Electrochemical hydrogen storage characteristics of Mg<sub>1.5</sub>Al<sub>0.5</sub>-xZrxNi (x=0, 0.1, 0.2, 0.3, 0.4, 0.5) alloys synthesized by mechanical alloying**

ANIK M., GAŞAN H., Topcu S., AKAY ERDOĞAN I., Aydinbeyli N.

INTERNATIONAL JOURNAL OF HYDROGEN ENERGY, vol.34, no.6, pp.2692-2700, 2009 (SCI-Expanded)

- XIX. **Boride layer growth kinetics of the borided hypoeutectoid plain carbon steels by the powder-pack method**

ÇELİK O. N., Aydinbeyli N., GAŞAN H.

PRAKTISCHE METALLOGRAPHIE-PRACTICAL METALLOGRAPHY, vol.45, no.7, pp.334-347, 2008 (SCI-Expanded)

## Articles Published in Other Journals

- I. **EFFECT OF Al CONTENT ON STRUCTURE AND WEAR BEHAVIOR OF AlCoCrFeMoNi HIGH ENTROPY ALLOYS**

GAŞAN H., LÖKÇÜ E.

The Online Journal of Science and Technology, vol.7, no.4, pp.63-67, 2017 (Peer-Reviewed Journal)

- II. **TURNING OPERATION OF NICKEL BASED SUPERALLOY RENE 41**

Tali D., GAŞAN H., GÜLEŞEN M., GÜRGEN S., KUŞHAN M. C.

International Journal of Mechanical and Production Engineering, vol.5, no.5, 2017 (Peer-Reviewed Journal)

- III. **Nikel Esaslı Süperalaşım Rene 41'xxin Tornalama İşlemi**

tali d., GAŞAN H., GÜLEŞEN M., GÜRGEN S., KUŞHAN M. C.

TEI Post, 2017 (Non Peer-Reviewed Journal)

- IV. **Borlanmış AISI 1030 çeliğinin abrazif aşınma özellikleri**

ÇELİK O. N., AKBAYIR Ö., GAŞAN H., ER Ü., AYDINBEYLİ N.

Eskişehir Osmangazi Üniversitesi Mühendislik Mimarlık Fakültesi Dergisi, vol.21, no.1, pp.71-86, 2008 (Peer-Reviewed Journal)

## Refereed Congress / Symposium Publications in Proceedings

- I. **INFLUENCE OF CRYOGENIC HEAT TREATMENT ON PERFORMANCE OF UNCOATED, ALCRN AND ALTiN CARBIDE CUTTING TOOLS IN MILLING OF Ti6Al4V**

Demircan Y., Gemici S., SERT A., ULUTAN M., GAŞAN H.

6th International Conference on Advances in Mechanical Engineering, İstanbul, Turkey, 20 October 2021, pp.1541-1553

- II. **PRODUCTION AND CHARACTERIZATION OF SiC REINFORCED BRASS MATRIX COMPOSITE MATERIAL BY SPS METHOD**

TOKAT BİRGİN P. Ç., UZ V., GÖREN R., AYDIN H., GAŞAN H., GÜRCAN K.

International Conference on Material Science and Technology, Ankara, Turkey, 18 - 20 October 2019

- III. **The Microstructure and Mechanical Properties of Novel (Co<sub>40</sub>Cr<sub>10</sub>Fe<sub>30</sub>Nb<sub>10</sub>Ni<sub>10</sub>)<sub>92</sub>Al<sub>8</sub> Eutectic High Entropy Alloy**  
ÖZCAN A., GAŞAN H., ÇELİK O. N.  
International Conference on Modern research in Engineering, Technology Science, 29 - 31 March 2019
- IV. **Effect of Deep Cryogenic Treatment on the Microstructure and Wear Behavior of Austempered Ductile Iron (GGG40)**  
GAŞAN H., KAYA S.  
4th International Conference on Engineering Technology and Applied Sciences, 24 - 28 April 2019
- V. **The Phase Stability and Mechanical Properties of (Co<sub>40</sub>Cr<sub>10</sub>Fe<sub>5</sub>Mo<sub>5</sub>Ni<sub>40</sub>)<sub>82,20</sub>Al<sub>17,80</sub> Eutectic High Entropy Alloy**  
GAŞAN H., ÖZCAN A., ÇELİK O. N.  
International Conference On Modern research in Engineering, Technology and Science, 29 - 31 March 2019
- VI. **Microstructure and Mechanical Properties (Co<sub>40</sub>Cr<sub>10</sub>Fe<sub>5</sub>Mo<sub>5</sub>Ni<sub>40</sub>)<sub>82,2</sub>Al<sub>17,8</sub> Eutectic High Entropy Alloy**  
GAŞAN H., ÖZCAN A., ÇELİK O. N.  
3rd INTERNATIONAL CONFERENCE ON ADVANCES IN NATURAL APPLIED SCIENCE ICANAS 2018, 9 - 12 May 2018
- VII. **Effects of Deep Cryogenic Treatment on the Wear Properties of 52 CrMoV4 Steel**  
ÖZDEN R. C., ANIK M., GAŞAN H.  
3rd INTERNATIONAL CONFERENCE ON ADVANCES IN NATURAL APPLIED SCIENCE ENGINEERING, 9 - 12 May 2018
- VIII. **Exploration of Eutectic High Entropy Alloys in the AlCoCrFeMoNi System**  
ÖZCAN A., GAŞAN H.  
3rd INTERNATIONAL CONFERENCE ON ADVANCES IN NATURAL APPLIED SCIENCE (ICANAS), 09 May 2018 - 12 May 2019
- IX. **The Effects Of Cryogenic Treatment On The Wear Resistance Of Grey Cast Iron Brake Discs**  
GAŞAN H., YATKIN G.  
8th International Advanced Technologies Symposium (IATS'17), 19 - 22 October 2017, pp.76
- X. **Effect of Ti addition on microstructure and Hardness of Al<sub>1.5</sub>CoCr FeMoNi high entropy alloys**  
GAŞAN H., LÖKÇÜ E., ÇELİK O. N., ÖZCAN A., ÇELİK YÜREK İ., ULUTAN M.  
METAL 2017 26. International conference on Metallurgy and Materials, Brno, Czech Republic, 24 - 26 May 2017, pp.79
- XI. **Effect of Mo Addition on the Microstructure and Mechanical Properties of AlCoCrFeNi Eutectic High Entropy Alloys**  
ÖZCAN A., GAŞAN H., ÇELİK O. N.  
26TH INTERNATIONAL CONFERENCE ON METALLURGY AND MATERIALS - METAL 2017, 24 - 26 May 2017
- XII. **Investigation of the Mechanism of Cryogenic Treatment on the Microstructural Changes in Tungsten Carbide Tools**  
SERT A., ÇELİK O. N., GAŞAN H.  
3th International Conference on Engineering and Natural Science - ICENS2017, Budapest, Hungary, 3 - 07 May 2017, pp.295
- XIII. **TURNING OPERATION OF NICKEL BASED SUPERALLOY RENE 41**  
TALİ D., GAŞAN H., GÜLEŞEN M., GÜRGEN S., KUŞHAN M. C.  
The IIER International Conference, Prag, Czech Republic, 21 - 22 March 2017, vol.1, pp.1-3
- XIV. **The Effect of Process Control Agent PCA Usage on the Structural Properties of MgB<sub>2</sub> Syntheses by High Energy Ball Mill**  
KURAMA H., ERKUŞ S., GAŞAN H.  
The 10th Asian Meeting of Electroceramics, 4 - 07 December 2016
- XV. **EFFECT OF Al CONTENT ON STRUCTURE AND WEAR BEHAVIOR OF AlCoCrFeMoNi HIGH ENTROPY ALLOYS**

GAŞAN H., LÖKÇÜ E.

International Science and Technology Conference, 13 - 15 July 2016

- XVI. **Effect of Mo Content on Structure and Wear Behavior of AlCoCrFeMoxNi x 0 5 1 0 High Entropy Alloys**

GAŞAN H., LÖKÇÜ E., özcan a., ÇELİK O. N., ÇELİK YÜREK İ., ULUTAN M., kurtuluş y.

25th International Conference on Metallurgy and Materials, Bruno, Czech Republic, 25 - 27 May 2016

- XVII. **Effect of process variables on synthesis of MgB<sub>2</sub> by a high energy ball mill**

KURAMA H., Erkus S., GAŞAN H.

Mineral Engineering Conference (MEC), Swieradow Zdroj, Poland, 25 - 28 September 2016, vol.8

- XVIII. **Effect of Cryogenic Treatment on The Mechanical Properties of Compacted Graphite Cast Iron**

GAŞAN H., AKIN C. M.

24th International Conference on Metallurgy and Materials, Brno, Czech Republic, 3 - 05 June 2015

- XIX. **Investigation of Lubrication and Wear Properties of Biodiesel and Diesel Fuels on Fuel Pump Material**

TAT M. E., ÇELİK O. N., KNOTHE G., ER Ü., GAŞAN H., ULUTAN M.

World Conference on Oilseed Processing, Fats & Oils Processing, Biofuels & Applications, İzmir, Turkey, 21 - 23 June 2011

- XX. **Effect of Lubrication and Wear Properties of Biodiesel added Ultra Low Sulfur Diesel (ULSD) Fuel on Common Rail Fuel Injection Pump Material**

TAT M. E., ÇELİK O. N., KNOTHE G., ER Ü., GAŞAN H., ULUTAN M.

World Conference on Oilseed Processing, Fats & Oils Processing, Biofuels & Applications, İzmir, Turkey, 21 - 23 June 2011, pp.34

- XXI. **TIG Yöntemiyle Yüzey Özellikleri Değiştirilen AISI 8620 Çeliğinin Adhesif Aşınma Özelliklerinin İncelenmesi**

ÇELİK O. N., ULUTAN M., BUYTOZ S., GAŞAN H., ER Ü.

13th International Materials Symposium IMSP'2010, Denizli, Turkey, 13 - 15 October 2010, pp.1504-1511

- XXII. **An investigation on fatigue life of borided AISI 1010 steel**

ÇELİK O. N., GAŞAN H., ULUTAN M., MURAT S.

Proceedings of 12th International Materials Symposium(IMSP'2008), Denizli, Turkey, 15 - 17 October 2008, pp.123-130

- XXIII. **Bazı Borlu Çeliklerin Toprak İşleme Aletlerinin Uç Demirlerinde Kullanımının Laboratuvar Koşullarında İncelenmesi**

ER Ü., GAŞAN H.

23. Tarımsal Mekanizasyon Ulusal Kongresi, Çanakkale, Turkey, 6 - 08 September 2006, pp.293-296

- XXIV. **Mekanik alaşımlama yöntemi ile üretilen amorf Mg<sub>50</sub>Ni<sub>50</sub> alaşımının ısı kararlılığı**

AYBAR K., AYDINBEYLİ N., GAŞAN H., ÇELİK O. N.

11. Uluslararası Denizli Malzeme Sempozyumu, 19 - 21 April 2006, pp.755-759

## Supported Projects

GAŞAN H., Project Supported by Higher Education Institutions, Kriyojenik İşlemin AISI D2 Çeliğinin Aşınma Davranışına Etkisinin İncelenmesi, 2016 - 2017

GAŞAN H., Kurtuluş Y., ULUTAN M., ÇELİK O. N., ÇELİK YÜREK İ., LÖKÇÜ E., ÖZCAN A., Project Supported by Higher Education Institutions, Yüksek-Entropili Alaşım (YEA) Tasarımı Anlayışı İle Üretilen AlCoCrFeMoNi Alaşımının Ti ve V İlavesi ile Aşınma Özelliklerinin İyileştirilmesi, 2014 - 2016

## Metrics

Publication: 47

Citation (WoS): 342

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