

Prof. Cevat Bora Derin

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International Researcher IDs

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Publons / Web Of Science ResearcherID: ABB-2085-2020

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Education Information

Doctorate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Metalurji Ve Malzeme Mühendisliği (Dr), Turkey 1999 - 2004

Postgraduate, Istanbul Technical University, Fen Bilimleri Enstitüsü, Üretim Metalurjisi Ve Mühendisliği (YI), Turkey 1997 - 1999

Undergraduate, Istanbul Technical University, Kimya-Metalurji Fakültesi, Metalurji Ve Malzeme Mühendisliği Bölümü, Turkey 1993 - 1997

Foreign Languages

English

Dissertations

Doctorate, Kurşun Oksit İçeren Curufların Kükürt Kapasitelerinin İncelenmesi, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Metalurji Ve Malzeme Mühendisliği (Dr), 2004

Postgraduate, Kobaltın Alumina içeren Fayalitik Curuflardaki Çözünürlüğünün İncelenmesi, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Üretim Metalurjisi Ve Mühendisliği (YI), 1999

Research Areas

Pyrometallurgy, Metallurgical and Materials Engineering, Production Metallurgy, Non-Ferrous Alloy Production, Iron and Steel Production, Recycling Processes, Non Metallic Materials Production, Engineering and Technology

Academic Titles / Tasks

Professor, Istanbul Technical University, Kimya-Metalurji, Metalurji Ve Malzeme Mühendisliği, 2021 - Continues

Associate Professor, Istanbul Technical University, Kimya-Metalurji, Metalurji Ve Malzeme Mühendisliği, 2012 - 2021

Assistant Professor, Istanbul Technical University, Kimya-Metalurji, Metalurji Ve Malzeme Mühendisliği, 2007 - 2012

Academic and Administrative Experience

İstanbul Teknik Üniversitesi, Kimya-Metalurji Fakültesi, 2016 - Continues

İstanbul Teknik Üniversitesi, Bilim-Toplum Uygulama Ve Araştırma Merkezi, 2015 - Continues

İstanbul Teknik Üniversitesi, Kimya-Metalurji Fakültesi, Metalurji Ve Malzeme Mühendisliği Bölümü, 2012 - Continues

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **The causation of hydrogen embrittlement of duplex stainless steel: Phase instability of the austenite phase and ductile-to-brittle transition of the ferrite phase – Synergy between experiments and modelling**
Örnek C., Mansoor M., Larsson A., Zhang F., Harlow G. S., Kroll R., Carlà F., Hussain H., Derin C. B., Kivisäkk U., et al.
Corrosion Science, vol.217, 2023 (SCI-Expanded)
- II. **First principles calculations and synthesis of multi-phase (HfTiWZr)B₂ high entropy diboride ceramics: Microstructural, mechanical and thermal characterization**
Kavak S., Bayrak K. G., Mansoor M., Kaba M., Ayas E., Balcı-Çağiran Ö., Derin C. B., Öveçoğlu M. L., Ağaoğulları D.
Journal of the European Ceramic Society, vol.43, no.3, pp.768-782, 2023 (SCI-Expanded)
- III. **B₄C Composites with a TiB₂-C Core-Shell Microstructure Produced by Self-Propagating High-Temperature Synthesis-Assisted Spark Plasma Sintering**
Çınar Şahin F., Mansoor M., Cengiz M., Apak B., Yanmaz L., Balazsi K., Fogarassy Z., Derin C. B., Göller G., Yücel O.
Journal of Physical Chemistry C, vol.126, no.47, pp.20114-20126, 2022 (SCI-Expanded)
- IV. **On the Production of W-Fe-B Ternary Compounds by Self-propagating High-Temperature Synthesis**
Soylu E., Kaya F., Sezen M., Bakan F., Tranell G., Derin B.
METALLURGICAL AND MATERIALS TRANSACTIONS B-PROCESS METALLURGY AND MATERIALS PROCESSING SCIENCE, vol.53, no.6, pp.3624-3634, 2022 (SCI-Expanded)
- V. **Synthesis and Microstructure Investigation of Ni₄₀Ti₅₀Cu₁₀ Intermetallic Shape Memory Alloys by Self-Propagating Combustion Method**
Keskin B., Bassani P., BAKAN F., SEZEN M., Derin B.
TRANSACTIONS OF THE INDIAN INSTITUTE OF METALS, vol.75, no.11, pp.2749-2758, 2022 (SCI-Expanded)
- VI. **Development and additive manufacturing of oxide dispersion strengthened inconel 718: Thermochemical and experimental studies**
Yalcin M. Y., Derin B., AYDOĞAN GÜNGÖR E.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.914, 2022 (SCI-Expanded)
- VII. **Influence of Co content on microstructure and hardness of AlCo_xCrFeNi (0 ≤ x ≤ 1) high-entropy alloys produced by self-propagating high-temperature synthesis**
Kaya F., Yetis M., Selimoglu G. I., Derin B.
ENGINEERING SCIENCE AND TECHNOLOGY-AN INTERNATIONAL JOURNAL-JESTECH, vol.27, 2022 (SCI-Expanded)
- VIII. **Synthesis and characterization of (HfMoTiWZr)C high entropy carbide ceramics**
Kavak S., Bayrak K. G., Bellek M., Mertdinç S., Muhaffel F., Gökçe H., Ayas E., Derin B., Öveçoğlu M. L., Ağaoğulları D.
CERAMICS INTERNATIONAL, vol.48, no.6, pp.7695-7705, 2022 (SCI-Expanded)
- IX. **Thermal oxidation of cold sprayed Ti-5Al-XZn coatings for tribological applications**
Çetiner D., ATAR E., Derin C. B., Çimenoğlu H.
MATERIALS LETTERS, vol.274, 2020 (SCI-Expanded)
- X. **Analysis of deposits from combustion chamber of boiler for dendromass**
Plesingerova B., Derin C. B., Vadasz P., Medved D.
FUEL, vol.266, 2020 (SCI-Expanded)
- XI. **Vacuum Oxy-nitro carburizing of tool steels: structure and mechanical reliability**

- Nikolova M., Nikolov D., Yankov E., Derin C. B., Topalski S.
INDIAN JOURNAL OF ENGINEERING AND MATERIALS SCIENCES, vol.27, no.1, pp.5-18, 2020 (SCI-Expanded)
- XII. **THE EFFECTS OF MICROWAVE-ASSISTED LEACHING ON THE TREATMENT OF ELECTRIC ARC FURNACE DUSTS (EAFD)**
Laubertova M., Havlik T., Parilak L., Derin C. B., Trpcevska J.
ARCHIVES OF METALLURGY AND MATERIALS, vol.65, no.1, pp.321-328, 2020 (SCI-Expanded)
- XIII. **Production of Mo₂NiB₂-type (M = Ni, Fe, Co) ternary boride containing alloys by self-propagating high temperature synthesis**
Moghaddam S. R., Kaya F., Derin B.
Engineering Science and Technology, an International Journal, vol.22, no.6, pp.1193-1198, 2019 (SCI-Expanded)
- XIV. **Influence of alumina and zirconia incorporations on the structure and wear resistance of titania-based MAO coatings**
Muhaffel F., Kaba M., Cenipura G., Derin B., Kruk A., Atar E., Çimenoglu H.
Surface and Coatings Technology, vol.377, 2019 (SCI-Expanded)
- XV. **Minimizing of copper losses to converter slag by a boron compound addition**
Topçu M. A., Rüßen A., Derin B.
Journal of Materials Research and Technology, vol.8, no.6, pp.6244-6252, 2019 (SCI-Expanded)
- XVI. **Production of Mo₂NiB₂ Based Hard Alloys by Self-Propagating High-Temperature Synthesis**
Moghaddam S. R., Derin B., Yücel O., Sönmez M. Ş., SEZEN M., BAKAN F., Sanin V. N., Andreev D. E.
HIGH TEMPERATURE MATERIALS AND PROCESSES, vol.38, pp.683-691, 2019 (SCI-Expanded)
- XVII. **Metals Recovery: Study of the Kinetic Aspects of Copper Acidic Leaching Waste Printed Circuit Boards from Discarded Mobile Phones**
Laubertova M., Derin C. B., Trpcevska J., Sandorova K., Smincakova E.
ACTA MONTANISTICA SLOVACA, vol.24, no.3, pp.223-233, 2019 (SCI-Expanded)
- XVIII. **Enrichment of W₂B₅ from WO₃ and B₂O₃ by Double SHS Method**
Derin B., Yazici S.
MATERIALS SCIENCE-MEDZIAGOTYRA, vol.24, no.1, pp.35-38, 2018 (SCI-Expanded)
- XIX. **Thermochemical modeling and experimental studies on the formation of TiB₂ through carbothermic synthesis from TiO₂ and B₂O₃ or B₄C**
Derin B., Kurtoğlu K., SAHIN F., Yücel O.
CERAMICS INTERNATIONAL, vol.43, no.14, pp.10975-10982, 2017 (SCI-Expanded)
- XX. **Investigation of Copper Losses to Synthetic Slag at Different Oxygen Partial Pressures in the Presence of Colemanite**
Rusen A., Derin B., GEVECİ A., TOPKAYA Y. A.
JOM, vol.68, no.9, pp.2316-2322, 2016 (SCI-Expanded)
- XXI. **Effects of Some Additives on Copper Losses to Matte Smelting Slag**
Rusen A., GEVECİ A., TOPKAYA Y. A., Derin B.
JOM, vol.68, no.9, pp.2323-2331, 2016 (SCI-Expanded)
- XXII. **Phosphate, Phosphide, Nitride and Carbide Capacity Predictions of Molten Melts by Using an Artificial Neural Network Approach**
Derin B., ALAN E., Suzuki M., Tanaka T.
ISIJ INTERNATIONAL, vol.56, no.2, pp.183-188, 2016 (SCI-Expanded)
- XXIII. **An experimental study on grinding of Zr-based bulk metallic glass**
Bakkal M., SERBEST E., KARIPCIN I., KUZU A. T., KARAGUZEL U., Derin B.
Advances in Manufacturing, vol.3, no.4, pp.282-291, 2015 (SCI-Expanded)
- XXIV. **Production of Al-Co-Ni Ternary Alloys by the SHS Method for Use in Nickel Based Superalloys Manufacturing**
Alkan M., Sönmez M. Ş., Derin B., YUCEL O., ANDREEV D. E., SANIN V. N., YUKHVID V. I.
HIGH TEMPERATURE MATERIALS AND PROCESSES, vol.34, no.3, pp.275-283, 2015 (SCI-Expanded)
- XXV. **Synthesis and rheology of ferrofluids: a review**
Genc S., Derin B.

CURRENT OPINION IN CHEMICAL ENGINEERING, vol.3, pp.118-124, 2014 (SCI-Expanded)

- XXVI. **Effects of process parameters on tungsten boride production from WO₃ by self propagating high temperature synthesis**
Yazici S., Derin B.
MATERIALS SCIENCE AND ENGINEERING B-ADVANCED FUNCTIONAL SOLID-STATE MATERIALS, vol.178, no.1, pp.89-93, 2013 (SCI-Expanded)
- XXVII. **Fabricating Porous Glass with Needle-Shaped Hydrate Crystals by Hydrothermal Treatment of Blast-Furnace Slag and Borosilicate Glass Mixture**
Suzuki M., Yamamoto T., Kuwata S., Derin B., Yamasaki N., Tanaka T.
MATERIALS TRANSACTIONS, vol.54, no.9, pp.1741-1749, 2013 (SCI-Expanded)
- XXVIII. **Carbothermic reduction of electric arc furnace dust and calcination of waelz oxide by semi-pilot scale rotary furnace**
Morcali M. H., Yücel O., Aydin A., DERIN B.
Journal of Mining and Metallurgy, Section B: Metallurgy, vol.48, no.2, pp.173-184, 2012 (SCI-Expanded)
- XXIX. **Effect of initial composition on boron carbide production by SHS process followed by acid leaching**
Alkan M., Sönmez M. Ş., DERIN B., Yücel O.
Solid State Sciences, vol.14, pp.1688-1691, 2012 (SCI-Expanded)
- XXX. **Investigation of effect of colemanite addition on copper losses in matte smelting slag**
Rusen A., GEVECI A., TOPKAYA Y. A., Derin B.
Canadian Metallurgical Quarterly, vol.51, no.2, pp.157-169, 2012 (SCI-Expanded)
- XXXI. **Sulfide capacity modeling of FeO_x-MO-SiO₂ (MO=CaO, MnO_x, MgO) melts**
Derin B., Yücel O., Reddy R.
Minerals and Metallurgical Processing, vol.28, no.1, pp.33-36, 2011 (SCI-Expanded)
- XXXII. **Production of tungsten boride from CaWO₄ by self-propagating high-temperature synthesis followed by HCl leaching**
Yazici S., Derin B.
INTERNATIONAL JOURNAL OF REFRACTORY METALS & HARD MATERIALS, vol.29, no.1, pp.90-95, 2011 (SCI-Expanded)
- XXXIII. **Sulphide Capacity Prediction of Molten Slags by Using a Neural Network Approach**
Derin C. B., Suzuki M., Tanaka T.
ISIJ INTERNATIONAL, vol.50, no.8, pp.1059-1063, 2010 (SCI-Expanded)
- XXXIV. **Sulphide Capacity Prediction of Molten Slags by Using a Neural Network Approach**
Derin B., Suzuki M., Tanaka T.
ISIJ INTERNATIONAL, vol.50, no.8, pp.1059-1063, 2010 (SCI-Expanded)
- XXXV. **Coating degradation of first and second stage gas turbine blades**
Maralcan C., DERIN B., Yücel O.
High Temperature Materials and Processes, vol.28, no.6, pp.343-346, 2009 (SCI-Expanded)
- XXXVI. **Producing nicral alloy by the SHS method for use in thermal spray powder manufacturing**
Derin B., DEMIRCAN U., Yücel O.
Metals and Materials International, vol.15, no.2, pp.331-336, 2009 (SCI-Expanded)
- XXXVII. **Carbothermal reduction - Nitridation study of Seydisehir alumina**
Cinar F., Kizilirmak V., Derin B., Yucel O., Ozdogru E.
SILICATES INDUSTRIELS, vol.69, pp.305-310, 2004 (SCI-Expanded)
- XXXVIII. **Production of aluminum nitride powders from Seydisehir aluminum hydroxide**
Ercayhan S., Derin C. B., Sahin F., Yucel O.
EURO CERAMICS VIII, PTS 1-3, pp.105-108, 2004 (SCI-Expanded)
- XXXIX. **Carbothermal recovery of zinc from brass ash**
Kahvecioğlu Ö., Derin B., Yücel O.
Transactions of the Institution of Mining and Metallurgy, Section C: Mineral Processing and Extractive Metallurgy, vol.112, pp.95-101, 2003 (SCI-Expanded)
- XL. **The distribution of cobalt between Co-Cu alloys and Al₂O₃-FeO-Fe₂O₃-SiO₂ slags**

Derin B., Yucel O.

Scandinavian Journal of Metallurgy, vol.31, no.1, pp.12-19, 2002 (SCI-Expanded)

XLI. Chloride removal from zinc ash

Sahin F., DERIN B., Yucel O.

Scandinavian Journal of Metallurgy, vol.29, no.5, pp.224-230, 2000 (SCI-Expanded)

Articles Published in Other Journals

I. First-principles investigation of optical properties of $AlFe(2-x)MxB_2$ ($x = 0-1$), ($M = Cr, V$) intermetallic compounds

Atalay A. S., Derin B., Khanghah M. F.

COMPUTATIONAL CONDENSED MATTER, vol.32, 2022 (ESCI)

II. Effect of SiC Particle Size on the Microstructural, Mechanical and Oxidation Properties of In-situ Synthesized HfB₂-SiC Composites

Gurcan K., Derin B., Ayas E.

JOURNAL OF POLYTECHNIC-POLITEKNIK DERGISI, vol.24, no.2, pp.503-510, 2021 (ESCI)

III. Protective Mo₂NiB₂-Ni Coatings by Centrifugal Metallothermic SHS

SANIN V. N., IKORNIKOV D. M., ANDREEV D. E., YUKHVID V. I., Derin B., Yücel O.

INTERNATIONAL JOURNAL OF SELF-PROPAGATING HIGH-TEMPERATURE SYNTHESIS, vol.24, no.3, pp.161-170, 2015 (ESCI)

IV. Field Responsive Fluids - a Review

Genc S., Derin B.

INNOVATION IN MATERIALS SCIENCE II, vol.521, pp.87-99, 2012 (Scopus)

Supported Projects

Derin C. B., Kızılyel Y., Project Supported by Higher Education Institutions, MoAlB Seramiklerinin Yanma Sentezi Yöntemi ile Üretimi, 2018 - 2020

Derin C. B., Project Supported by Higher Education Institutions, Some Computational Studies on Steelmaking Processes by FactSage, 2016 - 2018

Derin C. B., Project Supported by Higher Education Institutions, Şekil Hafızalı Ni-Ti-Cu-Fe Dörtlü Alaşımların Yanma Sentezi (SHS) ile Üretimi ve Karakterizasyonu, 2016 - 2018

Derin C. B., Project Supported by Higher Education Institutions, Treatment Of Acidic Waste Solutions Obtained From Shs Produced Tungsten Borides, 2013 - 2018

Derin C. B., Project Supported by Higher Education Institutions, A. Study on Estimation of Phosphorus Capacities of Molten Slags Using a Neural Network Approach, 2012 - 2018

Derin C. B., Project Supported by Higher Education Institutions, EFFECT OF HCl CONCENTRATION ON ZrB₂ SEPARATION FROM A SELF PROPAGATING HIGH TEMPERATURE SYNTHESIS SHS PRODUCT, 2011 - 2018

Derin C. B., Project Supported by Higher Education Institutions, DOUBLE SHS OF W₂B₅ POWDER CAW₀₄ AND B₂O₃, 2010 - 2018

Derin C. B., Project Supported by Higher Education Institutions, Zirkonyum esaslı Kütleli Metalik Camların Sentezi ve Karakterizasyonu, 2015 - 2016

Derin C. B., Project Supported by Higher Education Institutions, Bindirme Ara Slabları için Çelik Kalitesi Belirleme Çalışmaları, 2013 - 2016

Derin C. B., Project Supported by Higher Education Institutions, Çeşitli Cüruf Sistemlerinin Kükürt Kapasitelerinin İncelenmesi, 2012 - 2014

Derin C. B., Project Supported by Higher Education Institutions, Yapay Sinir Ağları Yaklaşımı ile Cüruflarda Fosfor Kapasitelerinin İncelenmesi, 2012 - 2014

Derin C. B., Project Supported by Higher Education Institutions, Yanma Sentezi Atık Çözeltilerinin GERİ Kazanım

Koşullarının İncelenmesi, 2011 - 2014

Derin C. B., Project Supported by Higher Education Institutions, Kendiliğinden İlerleyen Yüksek Sıcaklık Sentezi Yöntemi ile Yeni ve Özel Alaşımların Üretimi ve Geliştirilmesi, 2011 - 2012

Derin C. B., Project Supported by Higher Education Institutions, Kendiliğinden İlerleyen Yüksek Sıcaklık Sentezi Yöntemi İle Zirkonyum Diborür Tozu üretimi, 2010 - 2010

Derin C. B., Project Supported by Higher Education Institutions, Kendiliğinden İlerleyen Yüksek Sıcaklık Sentezi Yöntemi ile Tungsten Borür Tozu Üretimi, 2009 - 2009

Derin C. B., Project Supported by Higher Education Institutions, Yerel Kaynaklı Lateritik Nikel Cevherlerinden Ferronikel Üretimi, 2008 - 2008

Metrics

Publication: 140

Citation (WoS): 431

Citation (Scopus): 581

H-Index (WoS): 11

H-Index (Scopus): 13