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International Researcher IDs

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Publons / Web Of Science ResearcherID: AFE-3791-2022

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Education Information

Doctorate, Erciyes University, Fen Fakültesi, Fizik, Turkey 2017 - 2020

Postgraduate, Erciyes University, Fen Fakültesi, Fizik, Turkey 2014 - 2017

Undergraduate, Cumhuriyet Üniversitesi, Fen Fakültesi, Fizik, Turkey 2007 - 2011

Dissertations

Doctorate, Nano-Er₂O₃, Eu₂O₃, Gd₂O₃ ve Ho₂O₃ Katkılı Nano-Bi₂O₃ Katı Elektrolit Malzemelerin Sentezi ve Karakterizasyonu, Erciyes University, Fen Fakültesi, Fizik, 2020

Postgraduate, Samaryum trioksit, gadolinyum trioksit ve evropiyum trioksit katkı bismut trioksit tabanlı elektrolit malzemelerin karakterizasyonu, Erciyes University, Fen Fakültesi, Fizik, 2017

Research Areas

Physics, Natural Sciences

Academic Titles / Tasks

Research Assistant PhD, Erciyes University, Fen Fakültesi, Fizik, 2014 - Continues

Published journal articles indexed by SCI, SSCI, and AHCI

- Synthesis and characterization of cubic δ -phase stabilized Bi₂O₃ electrolytes by triple rare earth cation doping for intermediate temperatures SOFCs**
Balci M., Payveren M. A., Saatçi B., Arı M.
Micro and Nanostructures, vol.194, 2024 (SCI-Expanded)
- Investigation of the structural, thermo-electrical, and morphological properties of the Bi₂O₃ ceramics co-doped with rare earths**

Payveren M. A., BALCI M., SAATÇI B., ARI M.

Applied Physics A: Materials Science and Processing, vol.130, no.10, 2024 (SCI-Expanded)

- III. **The impact of calcination temperature on electrical conductivity and phase stability in double-doped (Bi₂O₃)_{x-y} (Er₂O₃)_x (Ho₂O₃)_y solid electrolytes**
BALCI M.
Ceramics International, vol.50, no.17, pp.29358-29367, 2024 (SCI-Expanded)
- IV. **Investigation of structural, thermo-electrical, and morphological features of the (Bi₂O₃)_{1-x-y} (Tm₂O₃)_x (Yb₂O₃)_y ternary systems for intermediate temperatures**
Balci M., Arıkan Payveren M., Saatçi B., Arı M.
SOLID STATE IONICS, vol.412, no.116583, pp.116583, 2024 (SCI-Expanded)
- V. **Structural, thermal, surface, and electrical properties of Bi₂O₃ ceramics co-doped with Er-Ho-Tb rare earths**
BALCI M.
JOURNAL OF THE AUSTRALIAN CERAMIC SOCIETY, vol.60, no.2, pp.385-397, 2024 (SCI-Expanded)
- VI. **An investigation on the phase formation and electrical properties of Bi₂O₃ ceramics co-doped with Ce-Ho-Tb rare earths**
Balci M., Payveren Arıkan M., Saatçi B., Arı M.
JOURNAL OF SOLID STATE CHEMISTRY, vol.329, no.--, pp.124447, 2024 (SCI-Expanded)
- VII. **The impact of annealing temperature and dopant concentration on the crystal structure and conductivity of single doped (Bi₂O₃)_{1-x}(Tb₄O₇)_x solid electrolyte systems**
Balci M., Saatçi B., Arı M.
PHYSICA B: CONDENSED MATTER, vol.673, no.-, pp.415487, 2024 (SCI-Expanded)
- VIII. **Synthesis and characterization of Dy-Eu-Tm co-doped cubic phase stabilized bismuth oxide based electrolytes in terms of intermediate temperature-solid oxide fuel cells (IT-SOFCs)**
GÜLDESTE A., Aldoori M., BALCI M., ARI M., Polat Y.
Journal of Rare Earths, vol.41, no.3, pp.406-412, 2023 (SCI-Expanded)
- IX. **A study of the microstructure and thermo-electrical properties of Bi₂O₃ ceramics co-doped with rare earth oxides**
BALCI M., ARI M.
Journal of Materials Science: Materials in Electronics, vol.34, no.6, 2023 (SCI-Expanded)
- X. **Effect of ratios of dopant contents on the electrical conductivity of Bi₂O₃ ceramics co-doped with some rare earth oxides**
Balci M., Saatci B., Turk H., Ari M.
MATERIALS TODAY COMMUNICATIONS, vol.33, 2022 (SCI-Expanded)
- XI. **Structural, thermal and electrical analysis of Tb-Gd-Sm co-doped Bi₂O₃-based solid solutions for intermediate-temperature solid oxide fuel cells (IT-SOFCs)**
Balci M., Al-Jaafer H., Arı M.
CHEMICAL PHYSICS LETTERS, vol.809, pp.140149, 2022 (SCI-Expanded)
- XII. **The synthesis of Eu-Tb-Ho co-doped Bi₂O₃-based ceramic powders for use in intermediate temperature-SOFCs**
Balci M., Saatçi B., Cerit S., Arı M.
SOLID STATE IONICS, vol.387, no.1, pp.116060, 2022 (SCI-Expanded)
- XIII. **The microstructure and thermo-electrical characterization of the Tb-Gd-Ho co-doped stabilized Bi₂O₃ based solid electrolyte systems**
BALCI M., Cengel A., ARI M.
CHINESE JOURNAL OF PHYSICS, vol.79, pp.89-97, 2022 (SCI-Expanded)
- XIV. **Synthesis and characterization of (Bi₂O₃)_(1-x-y-z)(Gd₂O₃)_(x)(Sm₂O₃)_(y)(Eu₂O₃)_(z) quaternary solid solutions for solid oxide fuel cell**
ARI M., BALCI M., Polat Y.
CHINESE JOURNAL OF PHYSICS, vol.56, no.6, pp.2958-2966, 2018 (SCI-Expanded)

Articles Published in Other Journals

- I. **Synthesis and Characterization of Tb–Er Co–Doped Bi₂O₃ Solid Electrolyte Systems**
Balci M.
CUMHURİYET SCIENCE JOURNAL, vol.44, no.3, pp.595-601, 2023 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

- I. **EFFECTS OF HEAT TREATMENT TEMPERATURE ON ION CONDUCTIVITY AND CRYSTAL PHASE STRUCTURE IN ERBIUM AND DYSPORTIUM CO–DOPED Bi₂O₃ SYSTEMS**
Balci M.
1. INTERNATIONAL COLOSSEUM SCIENTIFIC RESEARCHES AND INNOVATION CONGRESS” 13-14, OCTOBER 2024, ITALY, Rome, Italy, 13 - 14 October 2024, pp.142-143
- II. **INVESTIGATION OF THE EFFECTS OF HEAT TREATMENT TEMPERATURE ON PHASE FORMATION AND ELECTRICAL CONDUCTIVITY IN DOUBLE-DOPED Bi₂O₃ SOLID ELECTROLYTE SYSTEMS**
Balci M.
3. BİLSEL INTERNATIONAL TRUVA SCIENTIFIC RESEARCHES and INNOVATION CONGRESS 25-26 MAY, 2024, ÇANAKKALE/TÜRKİYE, Çanakkale, Turkey, 25 - 26 May 2024, vol.1213, pp.1213
- III. **SYNTHESIS AND CHARACTERIZATION OF THE Bi₂O₃ ELECTROLYTES DOPED WITH CeO₂, Ho₂O₃ and Tb₄O₇ RARE EARTHS**
Arıkan Payveren M., Balci M.
IV. BASKENT INTERNATIONAL CONFERENCE ON MULTIDISCIPLINARY STUDIES, Ankara, Turkey, 4 - 06 August 2023, pp.59-60
- IV. **A STUDY ON THE ELECTRICAL CONDUCTIVITY AND PHASE STABILITY OF THE (Bi₂O₃)_{1-x-y} (Tm₂O₃)_x (Yb₂O₃)_y DOUBLE–DOPED ELECTROLYTES AT INTERMEDIATE TEMPERATURES**
Arıkan Payveren M., Balci M.
IV. BASKENT INTERNATIONAL CONFERENCE ON MULTIDISCIPLINARY STUDIES, Ankara, Turkey, 4 - 06 August 2023, pp.61-62
- V. **CHARACTERIZATION OF STRUCTURAL, THERMAL, ELECTRICAL, AND MORPHOLOGICAL PROPERTIES OF Bi₂O₃ ELECTROLYTES CO–DOPED WITH LANTHANIDE OXIDES**
Arıkan Payveren M., Balci M.
1st BİLSEL INTERNATIONAL WORLD SCIENCE AND RESEARCH CONGRESS 24/25 JUNE 2023 ISTANBUL/TURKEY, İstanbul, Turkey, 24 - 25 June 2023, pp.505
- VI. **FABRICATION AND CHARACTERIZATION OF TB-SM-GD CO-DOPED Bi₂O₃ ELECTROLYTES FOR INTERMEDIATE TEMPERATURES**
Payveren Arıkan M., Balci M.
1 st BİLSEL INTERNATIONAL WORLD SCIENCE AND RESEARCH CONGRESS, İstanbul, Turkey, 24 - 25 June 2023, pp.504
- VII. **Structural, Electrical, Thermal and Mechanical Properties and Micro-hardness in Al Based Al-Sn-Mg in Ternary Alloys**
ALPER BİLLUR C., NAİR F., BALCI M., ARI M., SAATÇI B.
ICENS 2017 - 3rd Conference on Engineering and Natural Science, Budapest, Hungary, 3 - 07 May 2017, pp.681
- VIII. **GROWTH TEMPERATURE EFFECTS ON SURFACE MORPHOLOGY OF EPITAXIAL GaAs LAYERS GROWN BY MOCVD**
Balci M., Boz M. A., Demir İ., Kılıç D., Elagoz S.
TURKISH PHYSICAL SOCIETY 30th INTERNATIONAL PHYSICS CONGRESS, İstanbul, Turkey, 2 - 09 September 2013, pp.141

Supported Projects

BALCI M., PAYVEREN ARIKAN M., SAATÇI B., Project Supported by Higher Education Institutions, NanoTm203 ve NanoYb203 katkılı Bi203 katı elektrolit sistemlerinin elektriksel termal ve yapısal özelliklerinin araştırılması, 2023 - 2024

BALCI M., SAATÇI B., PAYVEREN ARIKAN M., Project Supported by Higher Education Institutions, Nano-Er203 ve Dy203 katkılı Bi203 katı elektrolit sistemlerinde tavlama sıcaklığının faz yapısı ve elektriksel iletkenlik üzerine etkilerinin araştırılması, 2023 - 2024

ARI M., POLAT Y., BALCI M., KARTAL Ş., SAATÇI B., ÖZPOZAN T., GÜNERİ E., Project Supported by Higher Education Institutions, Poly kristal Si (p-Si) ince filmlerin mürekkep püskürtme Inkjet tekniği ile hazırlanması ve fiziksel özelliklerinin araştırılması, 2017 - 2023

Karkı H. D., Elagöz S., Turan R., TUBITAK Project, Yüksek verimli ardışık gaxin1-xp/gaxin1-xas güneş pillerinin üretimi ve alttaş etkisinin araştırılması, 2010 - 2014

Metrics

Publication: 23

Citation (WoS): 59

Citation (Scopus): 59

H-Index (WoS): 6

H-Index (Scopus): 6

Scholarships

2210-C Yurt İçi Öncelikli Alanlar Yüksek Lisans Bursu, TUBITAK, 2014 - 2015