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International Researcher IDs

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Education Information

Post Doctorate, Dalhousie University, Physics and Atmospheric Science, Canada 2021 - 2022
Post Doctorate, İhsan Dogramaci Bilkent University, Faculty Of Science, Department Of Chemistry, Turkey 2019 - 2021
Doctorate, Inonu University, Fen Bilimleri Enstitüsü, Physics, Turkey 2015 - 2019
Postgraduate, Inonu University, Fen Bilimleri Enstitüsü, Fizik, Turkey 2012 - 2015
Undergraduate, Bursa Uludağ University, Fen-Edebiyat Fakültesi, Fizik, Turkey 2003 - 2009

Research Areas

Physics, Interdisciplinary Physics and Related Science and Technology Areas, Physical Chemistry, Materials Science

Academic Titles / Tasks

Assistant Professor, Ataturk University, Fen Fakültesi, Fizik, 2022 - Continues

Courses

Enerji Depolama Sistemleri ve Nanomalzeme Uygulamaları, Postgraduate, 2023 - 2024
Fizik , Undergraduate, 2023 - 2024
Fizik , Undergraduate, 2023 - 2024
Energy Storage Systems and Nanomaterials Applications, Postgraduate, 2023 - 2024
Energy Storage System and Nano-material Applications, Postgraduate, 2022 - 2023

Published journal articles indexed by SCI, SSCI, and AHCI

- I. High-performance Na-ion full-cells with P2-type $\text{Na}_{0.67}\text{Mn}_{0.5-x}\text{Ni}_x\text{Fe}_{0.43}\text{Al}_{0.07}\text{O}_2$ cathodes: Cost analysis for stationary battery storage systems
Kalyoncuoglu B., Ozgul M., ALTUNDAĞ S., BULUT F., ÖZ E., Sahinbay S., ALTIN S.
Journal of Energy Storage, vol.79, 2024 (SCI-Expanded)
- II. Unveiling the outstanding full-cell performance of P2-type $\text{Na}_{0.67}(\text{Mn}_{0.44}\text{Ni}_{0.06}\text{Fe}_{0.43}\text{Ti}_{0.07})\text{O}_2$ cathode active material for Na-ion batteries
Kalyoncuoglu B., Ozgul M., ALTUNDAĞ S., Harfouche M., ÖZ E., Avci S., Ji X., ALTIN S., Ates M. N.

- Journal of Power Sources, vol.591, 2024 (SCI-Expanded)
- III. **P2-type $\text{Na}_{0.67}\text{Mn}_{0.5-x}\text{V}_x\text{Fe}_{0.43}\text{Ti}_{0.07}\text{O}_2$ powders for Na-ion cathodes: Ex-situ structural analysis and full-cell study**
Dogan E., ALTUNDAĞ S., ALTIN E., ÖZ E., ALTIN S.
Electrochimica Acta, vol.473, 2024 (SCI-Expanded)
- IV. **Tunnel/Layer Composite $\text{Na}_{0.44}\text{MnO}_2$ Cathode Material with Enhanced Structural Stability via Cobalt Doping for Sodium-Ion Batteries**
Oz E., Altin S., Avci S.
ACS OMEGA, vol.8, no.30, pp.27170-27178, 2023 (SCI-Expanded)
- V. **Investigation of physical and electrochemical properties of Ni-doped Tunnel/P2 hybrid $\text{Na}_{0.44}\text{MnO}_2$ cathode material for sodium-ion batteries**
ÖZ E., ALTIN S., Avci S.
JOURNAL OF SOLID STATE CHEMISTRY, vol.318, 2023 (SCI-Expanded)
- VI. **Pd-NHC complex catalyzed C-H bond activation reactions of caffeine and 2-isobutylthiazole**
Bugday N., Khan S., YAŞAR S., BULUT F., Boulebd H., KARABIYIK H., KARABIYIK H., ÖZ E., Rehman A. U., ÖZDEMİR İ.
MOLECULAR CATALYSIS, vol.530, 2022 (SCI-Expanded)
- VII. **Localized X-ray photoelectron impedance spectroscopy (LoXPIS) for capturing charge dynamics of an ionic liquid electrolyte within an energy storage device**
Basaran M., Oz E., Ergoktas S., Kocabas C., Ulgut B., Kocabas A., Suzer S.
FARADAY DISCUSSIONS, vol.236, no.0, pp.86-102, 2022 (SCI-Expanded)
- VIII. **Magnetic Properties and Environmental Temperature Effects on Battery Performance of $\text{Na}_{0.67}\text{Mn}_{0.5}\text{Fe}_{0.5}\text{O}_2$**
ALTIN S., BAYRİ A., ALTIN E., Oz E., YAŞAR S., Altundag S., Harfouche M., AVCI S.
ENERGY TECHNOLOGY, vol.9, no.5, 2021 (SCI-Expanded)
- IX. **Structural and magnetic characterisation of Co substituted Ni_2MnSb Heusler alloy: effect of cobalt substitution on magnetism and Curie temperature**
Oz E., Ak F., SAATÇİ B.
PHILOSOPHICAL MAGAZINE, vol.101, no.2, pp.242-256, 2021 (SCI-Expanded)
- X. **Surface Propensity of Anions in a Binary Ionic-Liquid Mixture Assessed by Full-Range Angle-Resolved X-ray Photoelectron Spectroscopy and Surface-Tension Measurements**
Oz E., Sahin O., Okur H. I., Suzer S.
CHEMPHYSCHM, vol.21, no.21, pp.2397-2401, 2020 (SCI-Expanded)
- XI. **$\text{LiNi}_{0.8}\text{Co}_{0.15}\text{Ti}_{0.05}\text{O}_2$: synthesis by solid state reaction and investigation of structural and electrochemical properties with enhanced battery performance**
Bayri A., Gocer E., ALTIN E., ALTUNDAĞ S., Oz E., Harfouche M., ALTIN S., Avci S.
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.31, no.22, pp.20527-20538, 2020 (SCI-Expanded)
- XII. **Investigation of Ti-substitution effects on structural and electrochemical properties of $\text{Na}(0.)_{(67)}\text{Mn}(0.)_{(5)}\text{Fe}(0.)_{(5)}\text{O}(2)$ battery cells**
ALTIN S., Altundag S., ALTIN E., Oz E., Harfouche M., BAYRİ A.
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.44, no.14, pp.11794-11806, 2020 (SCI-Expanded)
- XIII. **Synthesis of $\text{Na}_2\text{Ti}_3\text{O}_7$ nanorods by a V-assisted route and investigation of their battery performance**
ALTIN S., Demirel S., Oz E., ALTIN E., Hetherington C., BAYRİ A., AVCI S.
CRYSTENGCHEM, vol.22, no.14, pp.2483-2490, 2020 (SCI-Expanded)
- XIV. **Investigation of hybrid-capacitor properties of ruthenium complexes**
ALTIN S., Oz E., Altundag S., BAYRİ A., Roisnel T., Dorcet V., Bruneau C., ÖZDEMİR İ., YAŞAR S.
INTERNATIONAL JOURNAL OF ENERGY RESEARCH, vol.43, no.13, pp.6840-6851, 2019 (SCI-Expanded)
- XV. **Structural and magnetic properties of $\text{Ni}_2\text{-xCo}_x\text{MnSb}$ ($x: 0.00, 0.25, 0.50$ and 1.00) Heusler alloys: The relationship between Curie temperature and lattice parameter**
Ak F., Oz E., SAATÇİ B.

- INTERMETALLICS, vol.111, 2019 (SCI-Expanded)
- XVI. **Cationic versus anionic Pt complex: The performance analysis of a hybrid-capacitor, DFT calculation and electrochemical properties**
Akkoc M., Demirel S., Oz E., ALTIN S., BAYRİ A., Dorcet V., Roisnel T., Bruneau C., ÖZDEMİR İ., YAŞAR S.
POLYHEDRON, vol.157, pp.434-441, 2019 (SCI-Expanded)
- XVII. **Investigations of the capacity fading mechanism of Na(0.44)MnO(2)via ex situ XAS and magnetization measurements**
ALTIN S., Oz E., ALTIN E., Demirel S., BAYRİ A., AVCI S.
DALTON TRANSACTIONS, vol.47, no.47, pp.17102-17108, 2018 (SCI-Expanded)
- XVIII. **Structural, magnetic, electrical, and electrochemical properties of Sr-Co-Ru-O: A hybrid-capacitor application**
ALTIN S., BAYRİ A., Demirel S., Oz E., ALTIN E., AVCI S.
JOURNAL OF THE AMERICAN CERAMIC SOCIETY, vol.101, no.10, pp.4572-4581, 2018 (SCI-Expanded)
- XIX. **Investigation of potential hybrid capacitor property of chelated N-Heterocyclic carbene Ruthenium(II) complex**
Akkoc M., Oz E., Demirel S., Dorcet V., Roisnel T., BAYRİ A., Bruneau C., ALTIN S., YAŞAR S., ÖZDEMİR İ.
JOURNAL OF ORGANOMETALLIC CHEMISTRY, vol.866, pp.214-222, 2018 (SCI-Expanded)
- XX. **X-ray Raman spectroscopy of lithium-ion battery electrolyte solutions in a flow cell**
KETENOĞLU D., Spiekermann G., Harder M., Oz E., Koz C., Yagci M. C., Yilmaz E., Yin Z., Sahle C. J., Detlefs B., et al.
JOURNAL OF SYNCHROTRON RADIATION, vol.25, pp.537-542, 2018 (SCI-Expanded)
- XXI. **Fabrication of Ca-Mn-Nb-O compounds and their structural, electrical, magnetic and thermoelectric properties**
Oz E., DEMİREL S., ALTIN S., ALTIN E., Baglayan O., BAYRİ A., AVCI S.
MATERIALS RESEARCH EXPRESS, vol.5, no.3, 2018 (SCI-Expanded)
- XXII. **Structural, magnetic, electrical and electrochemical properties of SrCo02.5, Sr₉Co₂Mn₅O₂₁ and SrMnO₃ compounds**
DEMİREL S., Oz E., ALTIN S., BAYRİ A., Baglayan O., ALTIN E., AVCI S.
CERAMICS INTERNATIONAL, vol.43, no.17, pp.14818-14826, 2017 (SCI-Expanded)
- XXIII. **Thermally Induced Spin State Transition in LiCoO₂ and Its Effects on Battery Performance**
Oz E., Demirel S., ALTIN S., ALTIN E., BAYRİ A., AVCI S.
ELECTROCHIMICA ACTA, vol.248, pp.449-453, 2017 (SCI-Expanded)
- XXIV. **Ring-expanded iridium and rhodium N-heterocyclic carbene complexes: a comparative DFT study of heterocycle ring size and metal center diversity**
KARACA E. Ö., Akkoc M., Oz E., ALTIN S., Dorcet V., Roisnel T., GÜRBÜZ N., Celik O., BAYRİ A., Bruneau C., et al.
JOURNAL OF COORDINATION CHEMISTRY, vol.70, no.7, pp.1270-1284, 2017 (SCI-Expanded)
- XXV. **Synthesis of ultra-thin nanobristles of Na-Mn-O compounds and their magnetic and structural properties**
Oz E., DEMİREL S., ALTIN S., BAYRİ A., AVCI S.
CERAMICS INTERNATIONAL, vol.42, no.15, pp.17059-17066, 2016 (SCI-Expanded)
- XXVI. **Fabrication and electrochemical properties of LiCo_{1-x}RuxO₂ cathode materials for Li-ion battery**
Oz E., DEMİREL S., ALTIN S.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.671, pp.24-33, 2016 (SCI-Expanded)
- XXVII. **Electrochemical effects and magnetic properties of B substituted LiCoO₂: Improving Li-battery performance**
Oz E., ALTIN S., DEMİREL S., BAYRİ A., ALTIN E., Baglayan O., AVCI S.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.657, pp.835-847, 2016 (SCI-Expanded)
- XXVIII. **Enhancement of battery performance of LiMn₂O₄: correlations between electrochemical and magnetic properties**
DEMİREL S., Oz E., ALTIN S., BAYRİ A., ALTIN E., AVCI S.
RSC ADVANCES, vol.6, no.49, pp.43823-43831, 2016 (SCI-Expanded)
- XXIX. **Magnetic and microstructural properties of LiCrO₂.Cr₂O₃ system by doping of the boron ions**

- DEMİREL S., Oz E., BAYRİ A., ALTIN S.
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.26, no.11, pp.9178-9184, 2015 (SCI-Expanded)
- XXX. **Growth mechanism and magnetic and electrochemical properties of Na_{0.44}MnO₂ nanorods as cathode material for Na-ion batteries**
DEMİREL S., Oz E., ALTIN E., ALTIN S., BAYRİ A., Kaya P., Turan S., Avci S.
MATERIALS CHARACTERIZATION, vol.105, pp.104-112, 2015 (SCI-Expanded)
- XXXI. **Magnetic and thermoelectric properties of B-substituted NaCoO₂**
ALTIN E., Oz E., Demirel S., BAYRİ A.
APPLIED PHYSICS A-MATERIALS SCIENCE & PROCESSING, vol.119, no.3, pp.1187-1196, 2015 (SCI-Expanded)
- XXXII. **An enhancement ZT and spin state transition of Ca₃Co₄O₉ with Pb doping**
Demirel S., ALTIN E., Oz E., ALTIN S., Bayri A.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.627, pp.430-437, 2015 (SCI-Expanded)
- XXXIII. **Thermoelectric and mechanical properties of Mg-Al-Sb alloys**
ALTIN E., Oz E., ERDEM M., DEMİREL S., AYDOĞDU Y., ALTIN S.
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.26, no.2, pp.1023-1032, 2015 (SCI-Expanded)
- XXXIV. **Thermal and mechanical properties of La-Al-Sb alloys**
ALTIN E., Oz E., DEMİREL S., ERDEM M.
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.25, no.12, pp.5331-5337, 2014 (SCI-Expanded)
- XXXV. **Vortex pinning and magnetic peak effect in Eu(Eu,Ba)(2.125)Cu₃O_x**
ALTIN E., Gokfeld D. M., DEMİREL S., Oz E., Kurt F., ALTIN S., YAKINCI M. C.
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.25, no.3, pp.1466-1473, 2014 (SCI-Expanded)

Articles Published in Other Journals

- I. **The mechanical and heat conducting properties of dental composites**
Kamalak H., Oz E., Demirel S., ALTIN S.
BIOINTERFACE RESEARCH IN APPLIED CHEMISTRY, vol.6, no.6, pp.1710-1716, 2016 (ESCI)
- II. **The leakage study between restorative and pulp capping materials and diffusion analysis by Fick laws**
Kamalak H., Demirel S., Oz E., ALTIN S.
BIOINTERFACE RESEARCH IN APPLIED CHEMISTRY, vol.6, no.1, pp.1042-1048, 2016 (ESCI)

Supported Projects

ÖZ E., SEVİM M., Project Supported by Higher Education Institutions, Molibden dopingi ile yapısal olarak kararlılığı arttırlımsı Sodyum iyon katot materyali sentezi fiziksel ve elektrokimyasal karakterizasyonu, 2023 - Continues
İçin K., Öztürk S., Alver Ü., Öz E., Bilgin S., Batalovic K., Ersöz M., TUBITAK Project, Li-Bataryalar ve Süperkapasitörler için Enerji Verimliliği Yüksek Nanofiber Formunda Yüksek Entropili Oksitlerin Tasarımı ve Özelliklerinin Geliştirilmesi, 2023 - 2026

Patent

Öz E., Li-ion and na-ion batteries with high capacity and long cycle life and synthesis technique of the cathode materials that are used in these batteries, Patent, CHAPTER G Physics, The Invention Recourse Number: PCT/TR2016/050096 ,

Standard Registration, 2016

Scientific Refereeing

Materials, SCI Journal, December 2022

International Journal of Innovative Research and Reviews, Other Indexed Journal, November 2022

JOURNAL OF THE AMERICAN CERAMIC SOCIETY, SCI Journal, December 2019

Metrics

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