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Research Areas

Engineering and Technology

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Carbon coated electric arc furnace dust prepared by one-pot pyrolysis: An efficient, low carbon footprint electrode material for lithium-ion batteries**
Karahan B. D.
MATERIALS CHEMISTRY AND PHYSICS, vol.287, 2022 (Peer-Reviewed Journal)
- II. **Upcycling of industrial iron scale waste for reutilization as anode material in lithium ion batteries**
Gulcan M. F. , Karahan B. D.
MATERIALS CHEMISTRY AND PHYSICS, vol.276, 2022 (Peer-Reviewed Journal)
- III. **Corrosion Behavior of Ni-Fe-Mo Deposits Obtained under Different Electrodeposition Conditions**
Solmaz R., Karahan B. D.
JOURNAL OF MATERIALS ENGINEERING AND PERFORMANCE, vol.30, no.8, pp.5593-5602, 2021 (Peer-Reviewed Journal)
- IV. **Modification of the Cu current collector by magnetron sputtering to improve the cycle performance of $MxOy$ (M:Ni,Mn,Co) anodes for lithium ion batteries**
Solmaz R., Karahan B. D.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.872, 2021 (Peer-Reviewed Journal)
- V. **Effect of vinylene carbonate as electrolyte additive for $Mn_2O_3/NiMnO_3$ anodes of lithium-ion batteries**
Solmaz R., Karahan B. D.
IONICS, vol.27, no.7, pp.2813-2824, 2021 (Peer-Reviewed Journal)
- VI. **Designing carbon-supported Fe_2O_3 anodes for lithium ion batteries**
Gulcan M. F. , Karahan B. D.
JOURNAL OF APPLIED ELECTROCHEMISTRY, vol.51, no.6, pp.917-931, 2021 (Peer-Reviewed Journal)
- VII. **ZrO₂ coating via e-beam evaporation on PE separators for lithium-ion batteries**
Sivlin D., Unal F., Karahan B. D. , Kazmanli K., Keles Ö.
IONICS, vol.27, no.2, pp.577-586, 2021 (Peer-Reviewed Journal)
- VIII. **Leaching of iron and chromium from an indigenous ferro chromium alloy via a rotary evaporator: optimum conditions determination and kinetic analysis**
Gulcan M. F. , Karahan B. D. , Gürmen S.
JOURNAL OF MATERIALS RESEARCH AND TECHNOLOGY-JMR&T, vol.9, no.6, pp.14103-14115, 2020 (Peer-Reviewed Journal)
- IX. **Superlattice-structured films by magnetron sputtering as new era electrodes for advanced lithium-**

ion batteries

Keleş Ö., Karahan B. D. , Eryilmaz L., Amine R., Abouimrane A., Chen Z., Zuo X., Zhu Z., Al-Hallaj S., Amine K.
NANO ENERGY, vol.76, 2020 (Peer-Reviewed Journal)

- X. **Fabrication of nickel manganese cobalt oxide (NMCO) anodes for lithium-ion batteries via hydrothermal process**
Solmaz R., Karahan B. D. , Keleş Ö.
JOURNAL OF APPLIED ELECTROCHEMISTRY, vol.50, no.10, pp.1079-1089, 2020 (Peer-Reviewed Journal)
- XI. **A Study on the Corrosion Behavior of 7072/3004/7072 Clad Aluminum Alloy in Different Media**
Tunc İ., Karahan B. D. , Keleş Ö.
Journal of Materials Engineering and Performance, vol.29, no.7, pp.4506-4514, 2020 (Peer-Reviewed Journal)
- XII. **Nickel-framed film with alternate layers of nickel and silicon for high performance lithium ion battery anodes**
Karahan B. D.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.823, 2020 (Peer-Reviewed Journal)
- XIII. **Characterization and corrosion studies of ternary Zn-Ni-Sn alloys**
Solmaz R., Karahan B. D.
INTERNATIONAL JOURNAL OF MINERALS METALLURGY AND MATERIALS, vol.27, no.1, pp.74-82, 2020 (Peer-Reviewed Journal)
- XIV. **Engineering self-standing Si-Mo-O based nanostructure arrays as anodes for new era lithium-ion batteries**
Karahan B. D. , Amine K.
JOURNAL OF APPLIED ELECTROCHEMISTRY, vol.49, no.7, pp.671-680, 2019 (Peer-Reviewed Journal)
- XV. **Molybdenum Oxide and Hybride Films as Anodes for Lithium Ion Batteries**
Karahan B. D. , Yagsi C., Keleş Ö.
JOURNAL OF NANOSCIENCE AND NANOTECHNOLOGY, vol.19, no.2, pp.941-949, 2019 (Peer-Reviewed Journal)
- XVI. **Si-Cu alloy nanowires grown by oblique angle deposition as a stable negative electrode for Li-ion batteries**
Polat B. D. , Keleş O., CHEN Z. H. , AMINE K.
JOURNAL OF MATERIALS SCIENCE, vol.51, no.13, pp.6207-6219, 2016 (Peer-Reviewed Journal)
- XVII. **Compositionally-graded silicon-copper helical arrays as anodes for lithium-ion batteries**
Polat D. B. , Keleş Ö., AMINE K.
JOURNAL OF POWER SOURCES, vol.304, pp.273-281, 2016 (Peer-Reviewed Journal)
- XVIII. **SiAg film by magnetron sputtering for high reversible lithium ion storage anodes**
Polat B. D. , ERYILMAZ O. L. , Keleş Ö.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.654, pp.363-370, 2016 (Peer-Reviewed Journal)
- XIX. **Functionally Graded Si Based Thin Films as Negative Electrodes for Next Generation Lithium Ion Batteries**
Polat B. D. , Keleş Ö.
ELECTROCHIMICA ACTA, vol.187, pp.293-299, 2016 (Peer-Reviewed Journal)
- XX. **The Effects of Film Thickness and Evaporation Rate on Si-Cu Thin Films for Lithium Ion Batteries**
Polat B. D. , Keleş Ö.
JOURNAL OF NANOSCIENCE AND NANOTECHNOLOGY, vol.15, no.12, pp.9788-9796, 2015 (Peer-Reviewed Journal)
- XXI. **Improving Si Anode Performance by Forming Copper Capped Copper-Silicon Thin Film Anodes for Rechargeable Lithium Ion Batteries**
POLAT B. D. , Keleş Ö.
ELECTROCHIMICA ACTA, vol.170, pp.63-71, 2015 (Peer-Reviewed Journal)
- XXII. **High capacity anode with well-aligned, ordered NISI nano-columnar arrays**
Polat B. D. , Eryilmaz O. L. , Chen Z., Keleş Ö., Amine K.
NANO ENERGY, vol.13, pp.781-789, 2015 (Peer-Reviewed Journal)
- XXIII. **Multi-layered Cu/Si nanorods and its use for lithium ion batteries**
Polat B. D. , Keleş Ö.

- JOURNAL OF ALLOYS AND COMPOUNDS, vol.622, pp.418-425, 2015 (Peer-Reviewed Journal)
- XXIV. **Well-aligned, ordered, nanocolumnar, Cu-Si thin film as anode material for lithium-ion batteries**
Polat D. B. , Keleş Ö., AMINE K.
JOURNAL OF POWER SOURCES, vol.270, pp.238-247, 2014 (Peer-Reviewed Journal)
- XXV. **Use of Multilayered Ni-Sn and Ni-Sn-C Thin Film Anodes for Lithium-Ion Batteries**
Polat B. D. , Abouimrane A., Sezgin N., Keles O., Amine K.
ELECTROCHIMICA ACTA, vol.135, pp.585-593, 2014 (Peer-Reviewed Journal)
- XXVI. **Nanocolumnar Structured Porous Cu-Sn Thin Film as Anode Material for Lithium-Ion Batteries**
Polat D. B. , LU J., ABOUIMRANE A., Keleş Ö., AMINE K.
ACS APPLIED MATERIALS & INTERFACES, vol.6, no.14, pp.10877-10885, 2014 (Peer-Reviewed Journal)
- XXVII. **A nano-architected porous electrode assembly of copper rich Cu₆Sn₅ thin film for rechargeable lithium batteries**
Polat B. D. , Sezgin N., Keleş Ö., Kazmanli K., Abouimrane A., Amine K.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.553, pp.204-207, 2013 (Peer-Reviewed Journal)
- XXVIII. **Generation of a Surface Pattern Having Conical Surface Features by Anodic Polarization of Aluminum**
Urgen M. K. , Keleş Ö., POLAT B. D. , BAYATA F.
JOURNAL OF THE ELECTROCHEMICAL SOCIETY, vol.159, no.9, 2012 (Peer-Reviewed Journal)

Supported Projects

Karahan B. D. P. , Gürmen S., TUBITAK Project, Development of Metal Doped Fe₂O₃-Cr₂O₃ Composite Powders Decorated with Al₂O₃ from Domestic Fe-Cr Alloys as Anode Materials for Lithium-Ion Batteries, 2019 - 2021

Metrics

Publication: 34

Citation (WoS): 239

Citation (Scopus): 255

H-Index (WoS): 10

H-Index (Scopus): 10