Asst. Prof. EMRE ÇİNKILIÇ

Personal Information

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International Researcher IDs
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Education Information

Doctorate, Ohio State University {Ohio}, United States Of America 2013 - 2019
Postgraduate, Ohio State University {Ohio}, United States Of America 2011 - 2013
Undergraduate, Dokuz Eylul University, Mühendislik Fakültesi, Metalurji Ve Malzeme Mühendisliği Bölümü, Turkey 2004 - 2009

Foreign Languages

English, C2 Mastery

Dissertations

Doctorate, Alloy Design and Precipitation Modeling of High Fe Concentration Recycled Cast Aluminum Alloys for Structural Applications, Ohio State University {Ohio}, 2019
Postgraduate, Comparison of Interface State Spectroscopy Techniques by Characterizing Dielectric – InGaAs Interfaces, Ohio State University {Ohio}, 2013

Research Areas

Testing and Control of Materials, Physical Properties, Intermetallics, Physical Metallurgy, Thermal Treatment, Material Characterization, Metallic Materials, Structure-Property Relationship, Non-Ferrous Alloy Production, Recycling Processes

Academic Titles / Tasks

Assistant Professor, Hakkari University, Mühendislik Fakültesi, Malzeme Bilimi Ve Mühendisliği, 2021 - Continues
Research Assistant, Ohio State University, Mühendislik Fakültesi, Malzeme Bilimi Ve Mühendisliği, 2013 - 2019
Research Assistant, Ohio State University, Mühendislik Fakültesi, Elektrik Ve Bilgisayar Mühendisliği, 2011 - 2013

Published journal articles indexed by SCI, SSCI, and AHCI

I. **The Beneficial Effect of Iron in Aluminum-Cerium-Based Cast Alloys**
Moodispaw M. P., ÇİNKILIÇ E., Miao J., Luo A. A.
Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, vol.55, no.5, pp.1351-1362, 2024 (SCI-Expanded)

II. **Strontium Effects on the Formation of Iron-Intermetallic Phases in Secondary Al–9Si–0.6Fe Alloys**
Balasubramani N., Moodispaw M., ÇİNKILIÇ E., Miao J., Luo A. A.
Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, vol.55, no.2, pp.550-568, 2024 (SCI-Expanded)

III. **Thermodynamic Modeling of Solid Flux Interactions with Molten Aluminum**
Moodispaw M. P., ÇİNKILIÇ E., Luo A. A.
International Journal of Metalcasting, 2024 (SCI-Expanded)

IV. **Optimization of T5 heat treatment in high pressure die casting of Al–Si–Mg–Mn alloys by using an improved Kampmann-Wagner numerical (KWN) model**
Zhang J., ÇİNKILIÇ E., Huang X., Wang G. G., Liu Y. (., Weiler J., Luo A. A.
Materials Science and Engineering: A, vol.865, 2023 (SCI-Expanded)

V. **A New Recycled Al–Si–Mg Alloy for Sustainable Structural Die Casting Applications**
ÇİNKILIÇ E., Moodispaw M., Zhang J., Miao J., Luo A. A.
Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, vol.53, no.8, pp.2861-2873, 2022 (SCI-Expanded)

VI. **On the interactions between molten aluminum and high entropy alloy particles during aluminum matrix composite processing**
Huang X., Zhang J., Miao J., ÇİNKILIÇ E., Wang Q., Luo A. A.
Journal of Alloys and Compounds, vol.895, 2022 (SCI-Expanded)

VII. **Modeling precipitation hardening and yield strength in cast Al-Si-Mg-Mn alloys**
ÇİNKILIÇ E., Yan X., Luo A. A.
Metals, vol.10, no.10, pp.1-14, 2020 (SCI-Expanded)

VIII. **Predicting gas and shrinkage porosity in solidification microstructure: A coupled three-dimensional cellular automaton model**
Gu C., Ridgeway C. D., ÇİNKILIÇ E., Lu Y., Luo A. A.
Journal of Materials Science and Technology, vol.49, pp.91-105, 2020 (SCI-Expanded)

IX. **A Formation Map of Iron-Containing Intermetallic Phases in Recycled Cast Aluminum Alloys**
ÇİNKILIÇ E., Ridgeway C., Yan X., Luo A.
Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, vol.50, no.12, pp.5945-5956, 2019 (SCI-Expanded)

X. **Three-dimensional cellular automaton simulation of coupled hydrogen porosity and microstructure during solidification of ternary aluminum alloys**
Gu C., Lu Y., Ridgeway C. D., ÇİNKILIÇ E., Luo A. A.
Scientific Reports, vol.9, no.1, 2019 (SCI-Expanded)

XI. **Predicting grain structure in high pressure die casting of aluminum alloys: A coupled cellular automaton and process model**
Gu C., Lu Y., ÇİNKILIÇ E., Miao J., Klarner A., Yan X., Luo A. A.
Computational Materials Science, vol.161, pp.64-75, 2019 (SCI-Expanded)

XII. **Investigation of the non-equilibrium solidification microstructure of a Mg–4Al–2RE (AE42) alloy**
Sun W., Shi X., ÇİNKILIÇ E., Luo A. A.
Journal of Materials Science, vol.51, no.13, pp.6287-6294, 2016 (SCI-Expanded)

XIII. **Impact of proton irradiation on deep level states in n-GaN**
Zhang Z., Arehart A., ÇİNKILIÇ E., Chen J., Zhang E., Fleetwood D., Schrimpf R., McSkimming B., Speck J., Ringel S.
Applied Physics Letters, vol.103, no.4, 2013 (SCI-Expanded)

XIV. **Interface trap characterization of atomic layer deposition Al 2O3/GaN metal-insulator-semiconductor capacitors using optically and thermally based deep level spectroscopies**
Jackson C. M., Arehart A. R., ÇİNKILIÇ E., McSkimming B., Speck J. S., Ringel S. A.

Journal of Applied Physics, vol.113, no.20, 2013 (SCI-Expanded)

Articles Published in Other Journals

I. **Characterization and modeling of concurrent precipitation in Mg-Al-Sn alloys using an improved Kampmann-Wagner numerical (KWN) model**
Miao J., Zhang C., Klarner A. D., Zhang J., ÇİNKILIÇ E., Zhang F., Luo A. A.
Materialia, vol.21, 2022 (Scopus)

Refereed Congress / Symposium Publications in Proceedings

I. **Effect of Vacuum Level on Porosity and Mechanical Properties of Aluminum Alloys in High Pressure Die Casting**
Trometer N., ÇİNKILIÇ E., Godlewski L., Prabhu E., Luo A.
MS&T21 Materials Science and Technology, Columbus, United States Of America, 17 November 2021
II. **Increasing Melt Efficiency and Secondary Alloy Usage in Aluminum Die Casting**
Luo A., ÇİNKILIÇ E., Moodispaw M., Zhang J., Yan X., Caron F., Brancleon P.
Die Casting Congress and Exposition, Indianapolis, United States Of America, 04 October 2021
III. **Melt-Refractory Interactions During Aluminum Melt Processing**
ÇİNKILIÇ E., Moodispaw M., Luo A., Chu Y., Yan X., Caron F.
Metalcasting Congress 2021, United States Of America, 12 April 2021
IV. **Thermodynamic Modeling of Solid Flux Interactions with Molten Aluminum**
Moodispaw M., ÇİNKILIÇ E., Luo A.
Metalcasting Congress 2021, United States Of America, 12 April 2021
V. **Use of CALPHAD Modeling in Controlling the Microstructure of Cast Aluminum Alloys**
ÇİNKILIÇ E., Klarner A., Sun W., Luo A.
American Foundry Society 119th Metalcasting Congress, Columbus, United States Of America, 20 April 2015

Metrics

Publication: 20
Citation (Scopus): 283
H-Index (Scopus): 10

Non Academic Experience

Company, Alcoa, Alcoa Technical Center