

## Asst. Prof. EMRE ÇİNKİLİÇ

### Personal Information

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### International Researcher IDs

ScholarID: 9MZ9oEsAAAAJ

ORCID: 0000-0001-7632-4843

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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 Ce additions to high Fe-containing secondary Al-Si-Mg cast alloys**  
Moodispaw M. P., Miao J., ÇİNKİLİÇ E., Luo A. A.  
Journal of Alloys and Compounds, vol.1009, 2024 (SCI-Expanded)
- II. **Thermodynamic Modeling of Solid Flux Interactions with Molten Aluminum**  
Moodispaw M. P., ÇİNKİLİÇ E., Luo A. A.  
International Journal of Metalcasting, vol.18, no.4, pp.2846-2852, 2024 (SCI-Expanded)
- III. **The Beneficial Effect of Iron in Aluminum-Cerium-Based Cast Alloys**  
Moodispaw M. P., ÇİNKİLİÇ 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)
- IV. **Strontium Effects on the Formation of Iron-Intermetallic Phases in Secondary Al-9Si-0.6Fe Alloys**  
Balasubramani N., Moodispaw M., ÇİNKİLİÇ 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)
- V. **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., ÇİNKİLİÇ E., Huang X., Wang G. G., Liu Y. (., Weiler J., Luo A. A.  
Materials Science and Engineering: A, vol.865, 2023 (SCI-Expanded)
- VI. **A New Recycled Al-Si-Mg Alloy for Sustainable Structural Die Casting Applications**  
ÇİNKİLİÇ 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)
- VII. **On the interactions between molten aluminum and high entropy alloy particles during aluminum matrix composite processing**  
Huang X., Zhang J., Miao J., ÇİNKİLİÇ E., Wang Q., Luo A. A.  
Journal of Alloys and Compounds, vol.895, 2022 (SCI-Expanded)
- VIII. **Modeling precipitation hardening and yield strength in cast Al-Si-Mg-Mn alloys**  
ÇİNKİLİÇ E., Yan X., Luo A. A.  
Metals, vol.10, no.10, pp.1-14, 2020 (SCI-Expanded)
- IX. **Predicting gas and shrinkage porosity in solidification microstructure: A coupled three-dimensional cellular automaton model**  
Gu C., Ridgeway C. D., ÇİNKİLİÇ E., Lu Y., Luo A. A.  
Journal of Materials Science and Technology, vol.49, pp.91-105, 2020 (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., ÇİNKİLİÇ E., Luo A. A.  
Scientific Reports, vol.9, no.1, 2019 (SCI-Expanded)
- XI. **A Formation Map of Iron-Containing Intermetallic Phases in Recycled Cast Aluminum Alloys**  
ÇİNKİLİÇ 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)
- XII. **Predicting grain structure in high pressure die casting of aluminum alloys: A coupled cellular automaton and process model**  
Gu C., Lu Y., ÇİNKİLİÇ E., Miao J., Klarner A., Yan X., Luo A. A.  
Computational Materials Science, vol.161, pp.64-75, 2019 (SCI-Expanded)
- XIII. **Investigation of the non-equilibrium solidification microstructure of a Mg-4Al-2RE (AE42) alloy**  
Sun W., Shi X., ÇİNKİLİÇ E., Luo A. A.  
Journal of Materials Science, vol.51, no.13, pp.6287-6294, 2016 (SCI-Expanded)
- XIV. **Impact of proton irradiation on deep level states in n-GaN**  
Zhang Z., Arehart A., ÇİNKİLİÇ 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)

- XV. **Interface trap characterization of atomic layer deposition Al<sub>2</sub>O<sub>3</sub>/GaN metal-insulator-semiconductor capacitors using optically and thermally based deep level spectroscopies**  
Jackson C. M., Arehart A. R., ÇİNKİLİÇ 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., ÇİNKİLİÇ 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., ÇİNKİLİÇ 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., ÇİNKİLİÇ E., Moodispaw M., Zhang J., Yan X., Caron F., Branclean P.  
Die Casting Congress and Exposition, Indianapolis, United States Of America, 04 October 2021
- III. **Melt-Refractory Interactions During Aluminum Melt Processing**  
ÇİNKİLİÇ 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., ÇİNKİLİÇ 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**  
ÇİNKİLİÇ E., Klarner A., Sun W., Luo A.  
American Foundry Society 119th Metalcasting Congress, Columbus, United States Of America, 20 April 2015

## Metrics

Publication: 21  
Citation (Scopus): 350  
H-Index (Scopus): 11

## Non Academic Experience

Company, Alcoa, Alcoa Technical Center