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International Researcher IDs

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Education Information

Doctorate, Iowa State University, Materials Science, United States Of America 2004 - 2009
Postgraduate, Middle East Technical University, Graduate School of Natural and Applied Sciences, Metalurji Ve Malzeme Mühendisliği (YI) (Tezli), Turkey 2001 - 2003
Undergraduate, Middle East Technical University, Faculty of Engineering, Department of Metallurgical and Materials Engineering, Turkey 1997 - 2001

Research Areas

Metallurgical and Materials Engineering, Engineering and Technology

Academic Titles / Tasks

Professor, Middle East Technical University, Faculty of Engineering, Department of Metallurgical and Materials Engineering, 2020 - Continues
Associate Professor, Middle East Technical University, Faculty of Engineering, Department of Metallurgical and Materials Engineering, 2015 - 2020
Assistant Professor, Middle East Technical University, Faculty of Engineering, Department of Metallurgical and Materials Engineering, 2011 - 2015
Lecturer PhD, Ames Laboratory Doe, 2009 - 2010
Research Assistant, Iowa State University of Science and Technology, 2004 - 2009
Research Assistant, Middle East Technical University, Faculty of Engineering, Department of Metallurgical and Materials Engineering, 2001 - 2004

Academic and Administrative Experience

Director of the Center, Middle East Technical University, Presidency Office, Toplum Bilim ve Bilim Uygulama ve Araştırma Merkezi, 2018 - 2024
Director of the Center, Middle East Technical University, Presidency Office, Kariyer Planlama Uygulama ve Araştırma Merkezi, 2018 - 2024
Rector's Advisor, Middle East Technical University, Presidency Office, 2016 - 2024
University Executive Board Member, Middle East Technical University, 2015 - 2018
Deputy Head of Department, Middle East Technical University, Faculty of Engineering, Department of Metallurgical and Materials Engineering, 2015 - 2016

Advising Theses

KALAY Y. E., A wafer level vacuum packaging technology for MEMS based long-wave infrared sensors, Doctorate, G.DEMİRHAN(Student), 2022
KALAY Y. E., IMPACT OF POST-GROWTH ANNEALING ON THE DEFECTS IN CDZnTe CRYSTALS, Postgraduate, M.UYSAL(Student), 2022
KALAY Y. E., Development of LSF-based dual-phase cathodes for intermediate temperature solid oxide fuel cells, Postgraduate, R.BABAZADEH(Student), 2022
KALAY Y. E., Al-Ge eutectic bonding for wafer-level vacuum packaging of mems devices, Postgraduate, B.GÜREL(Student), 2022
KALAY Y. E., Local structures of the Al - Re marginal metallic glasses and liquids: A molecular dynamics study, Postgraduate, D.SARITÜRK(Student), 2022
KALAY Y. E., Search for new cathode compositions for mildly acidic Zn-MnO₂ batteries, Postgraduate, Y.AKBAŞ(Student), 2022
KALAY Y. E., The effects of chemical short-range order on crystallization pathway in ternary marginal glass forming alloys, Postgraduate, E.ERDAL(Student), 2021
KALAY Y. E., Development of high strength lightweight high entropy alloys (LWHEAs), Doctorate, G.Polat(Student), 2020
KALAY Y. E., Structural and mechanical characterization of scale-up FeCoCrNi, FeCoCrNiCu, AND FeCoCrNiAlx high entropy alloys (HEAs), Postgraduate, Z.Anil(Student), 2020
Kalay Y. E., Özerinç S., Micromechanical characterization of metallic glass — crystalline nanocomposite coatings, Postgraduate, M.ABBOUD(Student), 2018
Kalay Y. E., Özerinç S., Experimental investigation of the mechanical properties of nanolayered metals, Postgraduate, A.TUNCAY(Student), 2018
KALAY Y. E., ÖZTÜRK T., Utilization of (La,Sr)CoO₃/(La,Sr)2CoO₄ heterostructures as cathode for it-SOFCs, Postgraduate, Z.ÇAĞRI(Student), 2017
KALAY Y. E., ÖZTÜRK T., Combinatorial development of LSC-113/LSC-214 cathode materials for intermediate temperature solid oxide fuel cells, Postgraduate, D.SARI(Student), 2017
ÖZTÜRK T., KALAY Y. E., Utilization of (La1-xSrx)CoO_{3-δ}/(La1-ySry)2CoO_{4±δ} heterostructures as cathode for it-SOFCs, Postgraduate, Z.ÇAĞRI(Student), 2017
KALAY Y. E., Production and characterization of CuZr-RE based bulk amorphous/nanocrystal composite, Postgraduate, F.SIKAN(Student), 2017
Kalay Y. E., Akdeniz M. V., Development of rare-earth free permanent magnets, Doctorate, A.MERVE(Student), 2017
KALAY Y. E., Production and characterization of aluminum-rare earth based bulk amorphous/nanocrystalline composite, Postgraduate, M.Kutsal(Student), 2016
KALAY Y. E., AKIN T., BONDING MATERIAL DEVELOPMENT AT WAFER LEVEL VACUUM PACKAGING FOR MEMS DEVICES BY TRANSIENT LIQUID PHASE (TLP) METHOD, Postgraduate, E.CAN(Student), 2016
KALAY Y. E., Local atomic structure in Al-RE marginal metallic glasses, Postgraduate, M.ÖVÜN(Student), 2016
KALAY Y. E., Characterization of Cd_{1-x}Zn_xTe single crystals, Postgraduate, B.YAŞAR(Student), 2016
KALAY Y. E., Production and characterization of aluminum-rare earth based bulk amorphous/nanocrystalline composite, Postgraduate, M.KUTSAL(Student), 2016
KALAY Y. E., Investigations of solid state phase transformations in manganese-aluminum alloys, Postgraduate, Ö.ACAR(Student), 2016
KALAY Y. E., Kalay Y., Investigation of solid state phase transformations in manganese-aluminum alloys, Postgraduate, Ö.Acar(Student), 2016
KALAY Y. E., The Mechanism of brittle fracture in CN3MN grade superaustenitic stainless steel /, Postgraduate, M.Başkan(Student), 2015
KALAY Y. E., TURAN R., Investigation of extended defects in cadmium zinc telluride crystals grown by Vertical Gradient Freeze (VGF) technique, Postgraduate, Ç.DOĞRU(Student), 2015
KALAY Y. E., The mechanism of brittle fracture in CN3MN grade superaustenitic stainless steel, Postgraduate, M.BAŞKAN(Student), 2015
KALAY Y. E., GÜR C. H., Investigation of microstructural homogeneity and thermal stability of equal channel angular pressed and aged 2024 Al alloy, Doctorate, G.KOTAN(Student), 2014
KALAY Y. E., Nanocrystallization in marginal glass forming alloys, Postgraduate, T.DEMİRTAŞ(Student), 2013
KALAY Y. E., Structural and dynamical evolution of nanocrystals, Postgraduate, C.YILDIRIM(Student), 2013
KALAY Y. E., Development of new lead-free solders for electronics industry, Postgraduate, A.KANTARCIÖĞLU(Student), 2012

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **"Characterization of Minerals, Metals, and Materials 2023"**
Zhang M., Peng Z., Li B., Hwang J., Monteiro S. N., Soman R., KALAY Y. E., Escobedo-Diaz J. P., Carpenter J. S., Brown A. D., et al.
Johnson Matthey Technology Review, vol.68, no.2, pp.275-276, 2024 (SCI-Expanded)
- II. **Engineering Oxygen Vacancies in (FeCrCoMnZn)3O4- δ High Entropy Spinel Oxides Through Altering Fabrication Atmosphere for High-Performance Rechargeable Zinc-Air Batteries**
Özgür Ç., Erdil T., Geyikli U., Okuyucu C., Lökçü E., Kalay Y. E., Toparlı Ç.
Global Challenges, vol.8, no.1, 2024 (SCI-Expanded)
- III. **Nanomechanical properties of Al-Tb marginal metallic glass**
OKUYUCU C., Ulucan T. H., Abboud M., Motalebzadeh A., ÖZERİNÇ S., Kalay İ., KALAY Y. E.
Materials Science and Engineering: A, vol.888, 2023 (SCI-Expanded)
- IV. **3D printing of hexagonal boron nitride nanosheets/polylactic acid nanocomposites for thermal management of electronic devices**
Gorur M. C., DOĞANAY D., DURUKAN M. B., Cicek M. O., KALAY Y. E., Kincal C., Solak N., ÜNALAN H. E.
COMPOSITES PART B-ENGINEERING, vol.265, 2023 (SCI-Expanded)
- V. **A Molecular Dynamics Study on the Local Structure of Al90Sm10 Marginal Metallic Glass and Liquid**
SARITÜRK D., KALAY Y. E.
Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, vol.54, no.6, pp.2320-2328, 2023 (SCI-Expanded)
- VI. **Facile Synthesis and Origin of Enhanced Electrochemical Oxygen Evolution Reaction Performance of 2H-Hexagonal Ba2CoMnO6- δ as a New Member in Double Perovskite Oxides**
Erdil T., Lökçü E., Yıldız İ., Okuyucu C., Kalay Y. E., Toparlı Ç.
ACS OMEGA, vol.7, no.48, pp.44147-44155, 2022 (SCI-Expanded)
- VII. **Design of oxygen-doped TiZrHfNbTa refractory high entropy alloys with enhanced strength and ductility**
Iroc L., Tukac O., Tannisevdi B., El-Atwani O., Tunes M., KALAY Y. E., AYDOĞAN GÜNGÖR E.
Materials and Design, vol.223, 2022 (SCI-Expanded)
- VIII. **Grain size stabilization of oxide dispersion strengthened CoCrFeNi-Y(2)O3 high entropy alloys synthesized by mechanical alloying**
Tekin M., Polat G., KALAY Y. E., KOTAN H.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.887, 2021 (SCI-Expanded)
- IX. **Highly stable silver-platinum core-shell nanowires for H2O2 detection**
Koylan S., Tunca S., Polat G., Durukan M. B., Kim D., Kalay Y. E., Ko S. H., Ünalhan H. E.
NANOSCALE, vol.13, no.30, pp.13129-13141, 2021 (SCI-Expanded)
- X. **Wafer-Level Low-Temperature Solid-Liquid Inter-Diffusion Bonding With Thin Au-Sn Layers for MEMS Encapsulation**
Temel O., KALAY Y. E., AKIN T.
JOURNAL OF MICROELECTROMECHANICAL SYSTEMS, vol.30, no.1, pp.64-71, 2021 (SCI-Expanded)
- XI. **The Anomalous Nucleation in Al-Tb Metallic Glasses**
Ulucan T. H., Kalay I., Kalay Y. E.
Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, vol.52, no.2, pp.700-710, 2021 (SCI-Expanded)
- XII. **Design of Novel Non-equiatomic Cu-Ni-Al-Ti Composite Medium-Entropy Alloys**
POLAT G., Erdal Z. A., KALAY Y. E.
JOURNAL OF MATERIALS ENGINEERING AND PERFORMANCE, vol.29, no.5, pp.2898-2908, 2020 (SCI-Expanded)
- XIII. **Effect of Sm on Crystallization Kinetics of Cu-Zr-Al Metallic Glasses**
Sikan F., Polat G., Kalay I., Kalay Y. E.
THERMOCHIMICA ACTA, vol.683, 2020 (SCI-Expanded)
- XIV. **Investigation of phase selection hierarchy in Mn-Al alloys**
Genc A. M., Acar O., Turan S., Kalay I., Savaci U., KALAY Y. E.
Intermetallics, vol.115, 2019 (SCI-Expanded)
- XV. **Effect of Sm on thermal and mechanical properties of Cu-Zr-Al bulk metallic glasses**
Sikan F., Atabay S. E., Motalebzadeh A., Özerinç S., Kalay I., Kalay Y. E.
MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING, vol.743, pp.168-174, 2019 (SCI-Expanded)
- XVI. **Segregation resistant nanocrystalline/amorphous (La, Sr) CoO3-(La,Sr)2CoO4 composite cathodes for IT-SOFCs**
Sari D., Yaşar B., Pişkin F., KALAY Y. E., ÖZTÜRK T.
Journal of the Electrochemical Society, vol.166, no.15, 2019 (SCI-Expanded)
- XVII. **Combinatorial development of nanocrystalline/amorphous (La,Sr)CoO3-(La,Sr)2CoO4 composite cathodes for IT-SOFCs**
Sari D., Pişkin F., Torunoglu Z. C., Yaşar B., Kalay Y. E., Öztürk T.
Solid State Ionics, vol.326, pp.124-130, 2018 (SCI-Expanded)
- XVIII. **One pot synthesis of (La,Sr)CoO3/(La,Sr)2CoO4 for IT-SOFCs cathodes**
Torunoglu Z. C., Sari D., Demircan O., Kalay Y. E., Öztürk T., Kuru Y.
International Journal of Hydrogen Energy, vol.43, pp.18642-18649, 2018 (SCI-Expanded)
- XIX. **Stress evolution of Ge nanocrystals in dielectric matrices**
Bahariqushchi R., Raciti R., KASAPOĞLU A. E., GÜR E., Sezen M., Kalay E., MIRABELLA S., AYDINLI A.
NANOTECHNOLOGY, vol.29, no.18, 2018 (SCI-Expanded)
- XX. **Microstructure effects on process outputs in micro scale milling of heat treated Ti6Al4V titanium alloys**
Ahmadi M., Karpat Y., ACAR O., KALAY Y. E.
JOURNAL OF MATERIALS PROCESSING TECHNOLOGY, vol.252, pp.333-347, 2018 (SCI-Expanded)
- XXI. **HRTEM Analysis of Crystallographic Defects in CdZnTe Single Crystal**
Yaşar B., ERGUNT Y., KABUKCUOĞLU M. P., PARLAK M., TURAN R., KALAY Y. E.
JOURNAL OF ELECTRONIC MATERIALS, vol.47, no.1, pp.778-784, 2018 (SCI-Expanded)
- XXII. **Preparation of La0.8Sr0.2CoO3- δ sputtering targets using a deformable compaction die**
Sari D., TORUNOĞLU Z. C., KALAY Y. E., Öztürk T.
CERAMICS INTERNATIONAL, vol.43, no.17, pp.15185-15188, 2017 (SCI-Expanded)
- XXIII. **Preface**
Ikhmayies S., Li B., Carpenter J. S., Li J., Hwang J., Monteiro S. N., Firrao D., Zhang M., Peng Z., Escobedo-Diaz J. P., et al.
Minerals, Metals and Materials Series, pp.3-9, 2017 (SCI-Expanded)
- XXIV. **The role of amorphous precursor in phase selection hierarchy in marginal metallic glasses**
YILDIRIM C., KUTSAL M., OTT R. T., BESSER M. F., KRAMER M. J., KALAY Y. E.
MATERIALS & DESIGN, vol.112, pp.479-484, 2016 (SCI-Expanded)
- XXV. **Long-term thermal stability of Equal Channel Angular Pressed 2024 aluminum alloy**
TAN G., KALAY Y. E., GÜR C. H.
MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING, vol.677, pp.307-315, 2016 (SCI-Expanded)
- XXVI. **Synthesis of AlNiCo core/shell nanopowders**
Genc A. M., Akdeniz M. V., Öztürk T., Kalay Y. E.

- JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, vol.417, pp.112-116, 2016 (SCI-Expanded)
- XXVII. **Flexible, silver nanowire network nickel hydroxide core-shell electrodes for supercapacitors**
YUKSEL R., Coskun S., KALAY Y. E., ÜNALAN H. E.
JOURNAL OF POWER SOURCES, vol.328, pp.167-173, 2016 (SCI-Expanded)
- XXVIII. **Synthesis and characterization of hydrothermally grown potassium titanate nanowires**
Kapusuz D., Kalay Y. E., Park J., Öztürk A.
JOURNAL OF CERAMIC PROCESSING RESEARCH, vol.16, no.3, pp.291-297, 2015 (SCI-Expanded)
- XXIX. **Kinetics and Mechanisms of Isothermal Devitrification in Amorphous Cu₅₀Zr₅₀**
Cullinan T., Kalay I., KALAY Y. E., Kramer M., Napolitano R.
METALLURGICAL AND MATERIALS TRANSACTIONS A-PHYSICAL METALLURGY AND MATERIALS SCIENCE, no.2, pp.600-613, 2015 (SCI-Expanded)
- XXX. **Structural modeling of liquid and amorphous Al₉₁Tb₉ by Monte Carlo simulations**
ÖVÜN M., KRAMER M. J., KALAY Y. E.
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.405, pp.27-32, 2014 (SCI-Expanded)
- XXXI. **Palladium doped perovskite-based NO oxidation catalysts: The role of Pd and B-sites for NO_x adsorption behavior via in-situ spectroscopy**
Say Z., Dogac M., Vovk E. I., KALAY Y. E., KIM C. H., LI W., Ozensoy E.
APPLIED CATALYSIS B-ENVIRONMENTAL, vol.154, pp.51-61, 2014 (SCI-Expanded)
- XXXII. **Embrittlement in CN3MN Grade Superaustenitic Stainless Steels**
BASKAN M., Chumbley S. L., KALAY Y. E.
METALLURGICAL AND MATERIALS TRANSACTIONS A-PHYSICAL METALLURGY AND MATERIALS SCIENCE, no.5, pp.2405-2411, 2014 (SCI-Expanded)
- XXXIII. **Germanium nanowire synthesis using solid precursors**
AKSOY B., KALAY Y. E., ÜNALAN H. E.
JOURNAL OF CRYSTAL GROWTH, vol.392, pp.20-29, 2014 (SCI-Expanded)
- XXXIV. **Effects of Al and Fe additions on microstructure and mechanical properties of SnAgCu eutectic lead-free solders**
KANTARCIÖGLÜ A., KALAY Y. E.
MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING, vol.593, pp.79-84, 2014 (SCI-Expanded)
- XXXV. **Kinetics of fcc-Al nanocrystallization in Al₉₀Tb₁₀ metallic glass**
DEMIRTAS T., KALAY Y. E.
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.378, pp.71-78, 2013 (SCI-Expanded)
- XXXVI. **Homogenization of ECAPed Al 2024 alloy through age-hardening**
KOTAN G., TAN E., KALAY Y. E., GÜR C. H.
MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING, vol.559, pp.601-606, 2013 (SCI-Expanded)
- XXXVII. **Effect of silver encapsulation on the local structure of titanosilicate ETS-10**
GALIOĞLU S., ZAHMAKIRAN M., KALAY Y. E., OZKAR S., Akata B.
MICROPOROUS AND MESOPOROUS MATERIALS, vol.159, pp.1-8, 2012 (SCI-Expanded)
- XXXVIII. **Hydrothermal zinc oxide nanowire growth using zinc acetate dihydrate salt**
AKGUN M. C., KALAY Y. E., ÜNALAN H. E.
JOURNAL OF MATERIALS RESEARCH, vol.27, no.11, pp.1445-1451, 2012 (SCI-Expanded)
- XXXIX. **Nanoscale Structure and Structural Relaxation in Zr₅₀Cu₄₅Al₅ Bulk Metallic Glass**
HWANG J., MELGAREJO Z. H., Kalay Y. E., KALAY I., KRAMER M. J., STONE D. S., VOYLES P. M.
PHYSICAL REVIEW LETTERS, vol.108, no.19, 2012 (SCI-Expanded)
- XL. **Local chemical and topological order in Al-Tb and its role in controlling nanocrystal formation**
KALAY Y. E., Kalay I., HWANG J., VOYLES P. M., KRAMER M. J.
ACTA MATERIALIA, vol.60, no.3, pp.994-1003, 2012 (SCI-Expanded)
- XLI. **Eutectic-to-metallic glass transition in the Al-Sm system**
WANG N., KALAY Y. E., Trivedi R.
ACTA MATERIALIA, vol.59, no.17, pp.6604-6619, 2011 (SCI-Expanded)
- XLII. **Local structure in marginal glass forming Al-Sm alloy**
Kalay Y. E., Chumbley L. S., Kramer M. J., Anderson I. E.
INTERMETALLICS, vol.18, no.8, pp.1676-1682, 2010 (SCI-Expanded)
- XLIII. **Initial crystallization in a nanostructured Al-Sm rare earth alloy**
Kalay Y. E., YEAGER C., Chumbley L. S., Kramer M. J., Anderson I. E.
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.356, pp.1416-1424, 2010 (SCI-Expanded)
- XLIV. **Bioinspired synthesis of self-assembled calcium phosphate nanocomposites using block copolymer-peptide conjugates**
YUSUFOĞLU Y., HU Y., KANAPATHIPILLAI M., KRAMER M., Kalay Y. E., THIYAGARAJAN P., AKINC M., SCHMIDT-ROHR K., MALLAPRAGADA S.
JOURNAL OF MATERIALS RESEARCH, vol.23, no.12, pp.3196-3212, 2008 (SCI-Expanded)
- XLV. **Synthesis and characterization of ionic block copolymer templated calcium phosphate nanocomposites**
KANAPATHIPILLAI M., Yusufoglu Y., RAWAL A., HU Y. -, LO C. -, THIYAGARAJAN P., Kalay Y. E., Akinc M., MALLAPRAGADA S., SCHMIDT-ROHR K.
CHEMISTRY OF MATERIALS, vol.20, no.18, pp.5922-5932, 2008 (SCI-Expanded)
- XLVI. **Characterization of a marginal glass former alloy solidified in gas atomized powders**
Kalay Y. E., CHUMBLEY L. S., ANDERSON I. E.
MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING, vol.490, pp.72-80, 2008 (SCI-Expanded)
- XLVII. **Crystallization behavior in a highly driven marginal glass forming alloy**
Kalay Y. E., CHUMBLEY L. S., ANDERSON I. E.
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.354, no.26, pp.3040-3048, 2008 (SCI-Expanded)
- XLVIII. **Characterization of hypereutectic Al-Si powders solidified under far-from equilibrium conditions**
Kalay Y. E., CHUMBLEY L. S., ANDERSON I. E., NAPOLITANO R. E.
METALLURGICAL AND MATERIALS TRANSACTIONS A-PHYSICAL METALLURGY AND MATERIALS SCIENCE, no.7, pp.1452-1457, 2007 (SCI-Expanded)

Articles Published in Other Journals

- I. **Microstructure and Mechanical Properties of CoFeNiCuMn High-Entropy Alloys Produced by Laser Powder Bed Fusion**
Altınok S., Buscher M., Beckers M., KALAY Y. E.
Metallography, Microstructure, and Analysis, vol.13, no.4, pp.711-729, 2024 (ESCI)

Books & Book Chapters

- I. **Al-Sm Alloys Under Far-From-Equilibrium Conditions**
Okuyucu C., Kaygusuz B., Işıksağan C., Meydanoğlu O., Motallebzadeh A., Özerinç S., Kalay Y. E.
in: Light Metals 2021, Linus Perander, Editor, Springer Nature, Zürich, pp.85-91, 2021

- ACAR Ö., GENÇ A. M., KALAY İ., KALAY Y. E.
TMS 2017, 26 February 2017
- XXV. **Microstructural Characterization of Magnetic MnAl Alloys**
GENÇ A. M., ACAR Ö., KALAY İ., KALAY Y. E.
TMS 2017, 26 February - 02 March 2017
- XXVI. **Structural Characterization of LaxSr_{1-x}CoO₃ (LSC 113) / (LaxSr_{1-x})₂CoO₄ (LSC 214) Hetero-Interface Cathode for Intermediate Temperature Solid Oxide Fuel Cells**
SARI D., KALAY Y. E., ÖZTÜRK T.
TMS 2017 146th Annual Meeting and Exhibition, 26 February - 02 March 2017
- XXVII. **Medium-Range Correlations and Its Impact on Properties in Al-RE Marginal Glass Forming Alloys**
KUTSAL M., KALAY Y. E.
TMS 2017, 26 February 2017
- XXVIII. **Effect of Metalloid Addition on Anomalous Primary Crystallization of Al-RE Metallic Glasses**
KUTSAL M., ÇAM B., KALAY Y. E.
TMS 2017, 26 February 2017
- XXIX. **Synthesis of AlNiCo Core Shell Nanopowders by Hydrogen Plasma Reaction**
GENÇ A. M., AKDENİZ M. V., ÖZTÜRK T., KALAY Y. E.
MRS Fall Meeting 2016, 27 November - 02 December 2016
- XXX. **In situ Characterization of Binary Marginal Glass Forming Alloys during Isochronal Crystallization**
KALAY Y. E., KUTSAL M.
MS&T 2016, United States Of America, 23 - 27 October 2016
- XXXI. **The Surface and Bulk Kinetics of Oxygen Transport in Solid Oxide Fuel Cell Cathodes**
SARI D., torunoğlu z., PİŞKİN F., KURU Y., KALAY Y. E., ÖZTÜRK T.
IMMC 2016, Turkey, 29 September - 01 October 2016
- XXXII. **Sm Microalloyed Cu Zr Al Bulk Metallic Glasses**
SIKAN F., KALAY İ., KALAY Y. E.
IMMC 2016, Turkey, 26 September - 01 October 2016
- XXXIII. **Local Ordering in Molten State and Its Legacy on Abnormal Primary Crystallization in Al RE Metallic Glasses**
KUTSAL M., KALAY Y. E.
TMS 2016, United States Of America, 14 - 18 February 2016
- XXXIV. **Epsilon to Tau Phase Transformation in MnAl Alloy Systems**
GENÇ A. M., ACAR Ö., KALAY Y. E.
TMS 2016, United States Of America, 14 - 18 February 2016
- XXXV. **Characterization of Glassy and Partially Crystalline Cu Zr Al Sm Metallic Glasses**
SIKAN F., KALAY İ., KALAY Y. E.
TMS 2016, United States Of America, 14 - 18 February 2016
- XXXVI. **Combinatorial Development of Metal Hydrides for Thermal Coupling of Solid Oxide Fuel Cells**
SARI D., PİŞKİN F., Volodymyr Y., KURU Y., KALAY Y. E., ÖZTÜRK T.
TMS 2016, United States Of America, 14 - 18 February 2016
- XXXVII. **Effect of Cooling Rate on Mechanical Properties of MnAlFeNiCoHEAs**
Ulucan T., Koylan S., Koc S., KALAY Y. E.
TMS 2016, United States Of America, 14 - 18 February 2016
- XXXVIII. **Wafer Level Au Sn TLP Bonding from Eutectic Composition**
YILMAZ S., DEMİR E. C., Temel O., AKIN T., KALAY Y. E.
TMS 2016, United States Of America, 14 - 18 February 2016
- XXXIX. **Investigation of Medium Range Correlations in Marginal Glass Forming Alloys**
KUTSAL M., Ott R., Kramer M., KALAY Y. E.
TMS 2016, United States Of America, 14 - 18 February 2016
- XL. **HRTEM Analysis of Crystallographic Defects in Cd Zn Te Single Crystals**
KALAY Y. E., Erkunt Y., Kabukcuoğlu M., PARLAK M., TURAN R., YAŞAR B.
TMS 2016, United States Of America, 14 - 18 February 2016
- XLI. **Local Order Inheritance from Molten State in Marginal Glass Forming Alloys**
KUTSAL M., Ovun M., Kramer M., KALAY Y. E.
MRS 2015 FALL, 29 November - 04 December 2015
- XLII. **Development of AlNiCo Nanopowders with Improved Coercivity**
Genc M., AKDENİZ M. V., ÖZTÜRK T., KALAY Y. E.
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- XLIII. **Characterization of Amorphous and Partially Crystalline Cu Zr Al Sm Metallic Glass**
Sikan F., KALAY İ., KALAY Y. E.
Elektron Mikroskopi Kongresi, Turkey, 2 - 04 September 2015
- XLIV. **Development of Wafer Level Au Sn Eutectic Bonding Techniques for MEMS Applications**
YILMAZ S., Demir E. C., Temel O., AKIN T., KALAY Y. E.
Elektron Mikroskopi Kongresi, Turkey, 2 - 04 September 2015
- XLV. **Development Of Rare Earth Free Magnetic Mn Al Alloys**
Genc M., Acar O., KALAY Y. E.
Elektron Mikroskopi Kongresi, Turkey, 2 - 04 September 2015
- XLVI. **Probing the Local Structures in Metallic Glasses Using HRTEM and APT**
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Metrics

Publication: 114
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Awards

Kalay Y. E., 2019 EPD Materials Characterization Best Poster Award, Tms, March 2018

Non Academic Experience

Ames Laboratory US DOE

Ames Laboratory US DOE

Iowa State University

Orta Dogu Teknik Universitesi