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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 - Continues
Director of the Center, Middle East Technical University, Presidency Office, Kariyer Planlama Uygulama ve Araştırma Merkezi, 2018 - Continues
Middle East Technical University, Presidency Office, 2016 - Continues
Middle East Technical University, Bilim, Teknoloji, Mühendislik Ve Matematik Eğitimi Uygulama Ve Araştırma Merkezi, 2015 - Continues
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_x, AND FeCoCrNiAl_x high entropy alloys (HEAs), Postgraduate, Z.Anıl(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 (La_{1-x}Sr_x)CoO_{3-δ}/(La_{1-y}Sr_y)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 (TL_P) 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., Doganay D., Durukan M. B., Cicek M. O., Kalay Y. E., Kincal C., Solak N., Ünal 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., Ünal 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.

S. (Editor), Zhang,Zhang M. (Editor), Carpenter,Carpenter,Carpenter,Carpenter,Carpenter,Carpenter,Carpenter,Carpenter J. S., S., S., S., S., S., S., S. (Editor), Hwang,Hwang,Hwang,Hwang,Hwang,Hwang,Hwang,Hwang,Hwang,Hwang,Hwang,Hwang J. (Editor), Monteiro S. N. (Editor), Firrao, Firrao, Firrao, Firrao D. (Editor), Brown,Brown A. (Editor), et al.
Springer, London/Berlin , New-York, 2018

Refereed Congress / Symposium Publications in Proceedings

- I. **Al-Sm Alloys Under Far-From-Equilibrium Conditions**
Okuyucu C., Kaygusuz B., İşıksaçan C., Meydanoğlu O., Motallebzadeh A., Özerinç S., Kalay Y. E.
Light Metals Symposium held at the TMS Annual Meeting and Exhibition, 2021, Pennsylvania, United States Of America, 15 - 18 March 2021, vol.6, pp.85-91
- II. **Micromechanical Properties of Marginal Glass Forming Alloys**
Kalay İ., Ulucu T. H., Özerinç S., Kalay Y. E.
TMS Annual Meeting & Exhibition, California, United States Of America, 23 - 27 February 2020, pp.1
- III. **CdZnTe BULK-CRYSTAL GROWTH AND SURFACE PROCESSING TECHNOLOGY AT METU-CGL**
Ergunt Y., Kabukçuoğlu M. P., Balbasi Ö. B., Yaşar B., Kalay Y. E., Turan R., Parlak M.
International Conference on Radiation Applications , Belgrade, Serbia And Montenegro, 16 - 19 September 2019, pp.167-171
- IV. **Effect of B on the Properties of Low Density High Entropy Alloys (LDHEAs) Including Al, Ti, V, Cr and Mn Elements**
POLAT G., ERDAL Z. A., KALAY Y. E.
European Congress and Exhibition on Advanced Materials and Processes 2019, 1 - 05 September 2019
- V. **Synthesis and Development of Sm Microalloyed Zr-Cu-Al Based Metallic Glasses and Their Nanocomposites**
Çerçi B., Sikan F., Kalay Y. E., Kalay İ.
TMS, Texas, United States Of America, 10 - 14 March 2019, pp.117
- VI. **Plasma Synthesis of AlNiCo Core/Shell Nanopowders**
Genç A. M., Öztürk T., Kalay Y. E.
2018 MRS Fall Meeting, Massachusetts, United States Of America, 25 - 30 November 2018, vol.1, no.1
- VII. **Design, Production and Characterization of AlTiVMnSix(x=0.25, 0.50) Low Density High Entropy Alloys(LDHEAs)**
POLAT G., Erdal A., KALAY Y. E.
19.Uluslararası Metalurji ve Malzeme Kongresi, 25 - 27 November 2018
- VIII. **Mechanical Properties of FeCoCrNi High Entropy Alloy (HEA) Produced from Industrial Raw Materials by Induction Melting**
Erdal a., POLAT G., KALAY Y. E.
19.Uluslararası Metalurji ve Malzeme Kongresi, 25 - 27 November 2018
- IX. **Advanced micromechanical characterization techniques for understanding materials behavior at the nanoscale**
Özerinç S., Abboud M., Motallebzadeh A., Kalay Y. E.
19th International Metallurgy and Materials Congress, İstanbul, Turkey, 25 - 27 October 2018, pp.1
- X. **Effect of Sm on Mechanical Properties of Cu-Zr-Al Bulk Metallic Glasses**
Sikan F., Kalay İ., Özerinç S., Kalay Y. E.
Materials Science & Technology 2018, Ohio, United States Of America, 14 - 18 October 2018, pp.1
- XI. **Design and Structural Investigation of TiCrMnVAl Low Density High Entropy Alloy (LDHEA)**
POLAT G., ERDAL Z. A., KALAY Y. E.
European Materials Research Society (E-MRS) 2018 Fall Meeting, 17 - 20 September 2018
- XII. **Embrittlement in Cast Superaustenitic Stainless Steel**
Kalay Y. E., Chumbley S., Başkan M.
TMS 2018, Arizona, United States Of America, 11 - 15 March 2018, pp.182
- XIII. **The Influence of Liquid Structure on the Devitrification of Solid Amorphous Al-based Marginal Glass Forming Alloys**
Kalay Y. E., Kalay İ., Yaşar B.
TMS 2018, Arizona, United States Of America, 11 - 15 March 2018, pp.95
- XIV. **Optimizing the ORR Activity in Hetero-Structured LSC-113 and LSC-214 Perovskites via Combinatorial Approach**
SARI D., Torunoğlu Z. Ç., KALAY Y. E., ÖZTÜRK T.
2017 Materials Research Society (MRS) Fall Meeting, 26 November - 01 December 2017
- XV. **Combinatorial Development of Thin Film La_{0.8}Sr_{0.2}CoO_{3-δ} / (La_{0.5}Sr_{0.5})₂CoO₄ Cathode Materials for Intermediate Temperature Solid Oxide Fuel Cells**
SARI D., Torunoğlu Z. Ç., KALAY Y. E., ÖZTÜRK T.
2nd International Symposium on Materials for Energy Storage and Conversion, 26 - 28 September 2017
- XVI. **One pot Pechini synthesis of (La,Sr)CoO₃ / (La,Sr)₂CoO₄ for Cathodes of ITSOFCs**
Torunoğlu Z. Ç., SARI D., DEMİRCAN O., KALAY Y. E., ÖZTÜRK T., KURU Y.
2nd International Symposium on Materials for Energy Storage and Conversion, 26 - 28 September 2017
- XVII. **Characterization of cation segregation in La_{0.8}Sr_{0.2}CoO_{3-δ} / (La_{0.5}Sr_{0.5})₂CoO₄ heterostructure**
YAŞAR B., SARI D., KALAY Y. E., ÖZTÜRK T.
2nd International Symposium on Materials for Energy Storage and Conversion, 26 - 28 September 2017
- XVIII. **Preparation of La_{0.8}Sr_{0.2}CoO_{3-δ} / (La_{0.5}Sr_{0.5})₂CoO₄ Sputtering Targets Using Deformable Compaction Die**
SARI D., Torunoğlu Z. Ç., KALAY Y. E., ÖZTÜRK T.
2nd International Symposium on Materials for Energy Storage and Conversion, 26 - 28 September 2017
- XIX. **Developing Al-Sm Alloys for Structural Applications**
POLAT G., KALAY Y. E.
TMS 2017 146th Annual Meeting and Exhibition, 26 February - 02 March 2017
- XX. **Investigation of Defects in CZT Single Crystals**
YAŞAR B., KABUKÇUOĞLU M., ERGUNT Y., PARLAK M., TURAN R., KALAY Y. E.
TMS 2017, 26 February - 02 March 2017
- XXI. **The Effects of ECAP on the Precipitation Behavior of Al 2024**
TAN G., KALAY Y. E., GÜR C. H.
TMS 2017 146th Annual Meeting and Exhibition, 26 February - 02 March 2017
- XXII. **Effect of Sm Micro-alloying on the mechanical behavior and crystallization kinetics of Cu-Zr-Al BMGs**
Sikan F., Kalay İ., Özerinç S., Kalay Y. E.
TMS Annual Meeting & Exhibition, California, United States Of America, 26 February - 02 March 2017, pp.1
- XXIII. **Nanocrystallization in Cu-Zr-Al-Sm Metallic Glasses**
SIKAN F., KALAY İ., KALAY Y. E.
TMS 2017, 26 February 2017
- XXIV. **Investigation Phase Transformation Route in Mn-Al Alloys**
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 $\text{La}_{x}\text{Sr}_{1-x}\text{CoO}_3$ (LSC 113) / $(\text{La}_{x}\text{Sr}_{1-x})_2\text{CoO}_4$ (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., PIŞKİN 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., PIŞKİN 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 MnAlFeNiCo HEAs**
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., KABUKÇUOĞLU 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**
GENÇ M., AKDENİZ M. V., ÖZTÜRK T., KALAY Y. E.
MRS 2015 FALL, 29 November - 04 December 2015
- 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., DEMİR 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**
GENÇ M., ACAR Ö., KALAY Y. E.
Elektron Mikroskopi Kongresi, Turkey, 2 - 04 September 2015
- XLVI. **Probing the Local Structures in Metallic Glasses Using HRTEM and APT**
KUTSAL M., OVUN M., YASAR B., KALAY Y. E.
Elektron Mikroskopi Kongresi, Turkey, 2 - 04 September 2015
- XLVII. **Investigation of Prenucleation Clustering in Al RE Marginal Glass Forming Alloys**
OVUN M., KUTSAL M., KRAMER M., KALAY Y. E.
ISMAMAM 2015, 13 July - 17 December 2015
- XLVIII. **Synthesis and Characterization of Al RE TM Nanocrystal Amorphous Nanocomposites**
KALAY Y. E., KUTSAL M.
ISMAMAM 2015, 13 July - 17 December 2015
- XLIX. **Phase Selection In Cu Zr Metallic Glass**
KALAY İ., KALAY Y. E., KRAMER M.
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- KALAY Y. E., Project Supported by Higher Education Institutions, AL-NTE METALİK CAM ALAŞIMLARINDA KISA VE ORTA ERİM DÜZENİNİN İNCELENMESİ, 2017 - 2017
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- KALAY Y. E., Project Supported by Higher Education Institutions, Elektronik Sanayii Alanında Kullanılmak Üzere Kurşunsuz Lehim Geliştirilmesi, 2012 - 2012

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Metrics

Publication: 114
Citation (WoS): 993
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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