

Prof. Ali Erçin ERSUNDU

Personal Information

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International Researcher IDs

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Biography

Prof. Dr. Ali Erçin Ersundu received his undergraduate degree from Istanbul Technical University, Department of Metallurgical and Materials Engineering in 2005. He later completed his master's and doctoral studies in Istanbul Technical University, Graduate School, Materials Science and Engineering program in 2007 and 2013, respectively. During his doctoral studies, he worked as a visiting researcher at the University of Illinois at Urbana-Champaign, Department of Materials Science and Engineering. In 2014, he started to work as a faculty member in the Department of Metallurgical and Materials Engineering at Yıldız Technical University. He was awarded the title of associate professor and full professor in 2018 and 2023, respectively. He continues to carry out his research at the Glass Research Laboratory of which he is the co-founder.

Prof. Dr. Ali Erçin Ersundu has carried out a wide range of pioneering studies on the development and integration of glass and glass-ceramic-based materials especially for energy and communication systems. Recently, he focused on glass and glass nanocomposites with color conversion properties and by synthesizing different lanthanide ions and quantum dots directly in glass matrices he was able to completely cut off their contact with the external environment, thus preventing their stability and degradation problems, preserving their luminous properties for a long time and expanding their application areas. With his pioneering work in this field, he paved the way for the integration of glass and glass nanocomposites with color conversion properties into new generation opto-electronic and photonic applications such as, solid-state lighting (LED), Agri-PV, three-dimensional volumetric display, optical temperature sensor and anti-counterfeiting.

In addition to his research-development and education-training activities, Prof. Dr. Ali Erçin Ersundu has also been working as the Director of Yıldız Technical University Science and Technology Application and Research Center (Central Research Laboratory) since September 2021.

In 2021 he was deemed worthy of the Turkish Academy of Sciences (TÜBA) - Outstanding Young Scientist (GEBİP)

award and became a member of the TÜBA Young Academy. In 2022, he was awarded the METU Prof. Dr. Mustafa N. Parlar Education and Research Foundation Research Incentive Award. Prof. Dr. Ali Erçin Ersundu is married with one little boy.

Education Information

Doctorate, İstanbul Technical University, Fen Bilimleri Enstitüsü, Malzeme Bilimi Ve Mühendisliği, Turkey 2007 - 2013
Doctorate, University Of Illinois At Urbana - Champaign (Prof. Waltraud M. Kriven Grubunda Ziyaretçi Araştırmacı),
Malzeme Bilimi Ve Mühendisliği, Turkey 2010 - 2012
Postgraduate, İstanbul Technical University, Fen Bilimleri Enstitüsü, Malzeme Bilimi Ve Mühendisliği, Turkey 2005 - 2007
Undergraduate, İstanbul Technical University, Kimya Metalurji Fakültesi , Metalurji Ve Malzeme Mühendisliği, Turkey
2000 - 2005

Dissertations

Doctorate, TELLÜR OKSİT ESASLI ÜÇLU SİSTEMLERİN İSİL, KİNETİK VE YAPISAL AÇIDAN İNCELENEREK CAMLAŞMA ÖZELLİKLERİNİN VE FAZ DENGELERLERİNİN TESPİTİ, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Malzeme Bilimi Ve Mühendisliği / İleri Teknolojiler, 2013
Postgraduate, YERLİ DEMİR CEVHERLERİNİN SÜNGER DEMİR ÜRETİMİNE UYGUNLUĞUNUN ARAŞTIRILMASI, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Malzeme Bilimi Ve Mühendisliği / İleri Teknolojiler, 2007

Research Areas

Metallurgical and Materials Engineering, Material science and engineering, Semiconductor and Superconductor Materials, Optical Properties, Glass Technology and Glass Ceramics, Material Characterization, Nanomaterials, Thermal Properties, Structure-Property Relationship, Engineering and Technology

Academic Titles / Tasks

Associate Professor, Yıldız Technical University, Faculty Of Chemical And Metallurgical Engineering, Department Of Metallurgical And Materials Engineering, 2018 - Continues
Assistant Professor, Yıldız Technical University, Faculty Of Chemical And Metallurgical Engineering, Department Of Metallurgical And Materials Engineering, 2018 - 2018
Assistant Professor, Yıldız Technical University, Faculty Of Chemical And Metallurgical Engineering, Department Of Metallurgical And Materials Engineering, 2014 - 2018

Academic and Administrative Experience

Manager of Research and Application Center, Yıldız Technical University, Bilim ve Teknoloji Uygulama ve Araştırma Merkezi, 2021 - Continues
Yıldız Teknik Üniversitesi, Kimya Metalurji Fakültesi, Metalurji Ve Malzeme Müh. Bölümü, 2015 - 2017
Nişantaşı Üniversitesi, Mühendislik Fakültesi, Makine Mühendisliği, 2013 - 2014

Courses

Glass Technology, Undergraduate, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017

Solution Thermodynamics, Undergraduate, 2018 - 2019

Phase Diagrams, Undergraduate, 2018 - 2019, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015

Malzeme Yapısı ve Kristalografisi, Postgraduate, 2018 - 2019, 2017 - 2018, 2016 - 2017

Materials Thermodynamics 2, Undergraduate, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015

Materials Thermodynamics, Undergraduate, 2018 - 2019

Technical English II, Undergraduate, 2017 - 2018, 2016 - 2017

Technical English I, Undergraduate, 2016 - 2017, 2015 - 2016

Materials Thermodynamics 1, Undergraduate, 2017 - 2018, 2016 - 2017, 2015 - 2016

Advising Theses

Ersundu A. E., Development of phosphor containing fluorescent dye added glasses, Doctorate, H.Gülşah(Student), Continues

Ersundu A. E., Development of Thin Glass Compositions, Doctorate, Y.Ateş(Student), Continues

Ersundu A. E., Development of Antimicrobial Oven Glasses, Postgraduate, Y.Ayaz(Student), Continues

Ersundu A. E., Samarium and Thulium Doped Luminescent Glass-Based LEDs in Indoor Agriculture Applications and Their Effects on Plant Growth, Postgraduate, U.Ekim(Student), 2023

Ersundu A. E., Development of CsPbBr₃ Perovskite Quantum Dot and Lanthanide-doped Glass Nanocomposites for Solid State Lighting Applications, Doctorate, E.Erol(Student), 2022

Ersundu A. E., Lanthanide and/or Quantum Dot Doped Luminescent Glasses/Glass Nanocomposites as Wavelength Convertors for Advanced Opto Electronic Applications, Doctorate, O.Kibrışlı(Student), 2022

Ersundu A. E., Effect of salt baths contaminated with different calcium compounds on chemical tempering efficiency, Postgraduate, A.Çalı(Student), 2021

Ersundu A. E., Development of Sol-Gel Based Anti-Reflective Coatings for Glasses Used in Photovoltaic Systems, Postgraduate, C.Yıldırım(Student), 2021

Ersundu A. E., Investigation the Effect of Weathering on Chemically Strengthened Thin Flat Glasses, Postgraduate, Y.Ateş(Student), 2020

Ersundu A. E., Investigation of electrical and structural properties in transition metal oxide containing tellurite and antimonite glasses, Postgraduate, O.Başak(Student), 2019

Ersundu A. E., Determination of vitrification behaviour and investigation of radiation shielding properties of bismuth oxide-lead chloride-tellurium oxide system through thermal, optical and structural studies, Postgraduate, V.Akıllı(Student), 2019

Ersundu A. E., Development and characterization of niobium-doped vanadium dioxide based thermochromic thin films for energy saving in buildings, Postgraduate, E.Doğan(Student), 2018

Ersundu A. E., Development and characterization of tungsten doped VO₂-based thermochromic thin film coated glasses, Postgraduate, M.Berkay(Student), 2017

Ersundu A. E., Development and characterization of photo-thermo-refractive glasses for three dimensional phase hologram applications, Postgraduate, O.Kibrışlı(Student), 2017

Ersundu A. E., Aydin S., Investigation of photocatalytic activity of boron and nitrogen doped TiO₂ thin films, Postgraduate, S.Çulhaoglu(Student), 2015

Ersundu A. E., Aydin S., Preparation and Characterization of Vanadium Oxide - Based Thermochromic Thin Films Produced by Sol-Gel Method, Postgraduate, M.Can(Student), 2014

Jury Memberships

Doctoral Examination, Doctoral Examination, Middle East Technical University, May, 2022

Doctoral Examination, Doctoral Examination, İstanbul Teknik Üniversitesi, May, 2021

Doctoral Examination, Doctoral Examination, İstanbul Teknik Üniversitesi, May, 2021

Doctoral Examination, Doctoral Examination, İstanbul Teknik Üniversitesi, May, 2021

Doctoral Examination, Doctoral Examination, İstanbul Teknik Üniversitesi, May, 2021
Doctoral Examination, Doctoral Examination, İstanbul Teknik Üniversitesi, May, 2021
Doctoral Examination, Doctoral Examination, Yıldız Teknik Üniversitesi, April, 2021
Doctoral Examination, Doctoral Examination, İzmir Yüksek Teknoloji Enstitüsü, April, 2021
Doctoral Examination, Doctoral Examination, İstanbul Teknik Üniversitesi, December, 2020
Doctoral Examination, Doctoral Examination, Yıldız Teknik Üniversitesi, June, 2020
Doctoral Examination, Doctoral Examination, İstanbul Teknik Üniversitesi, May, 2019
Doctoral Examination, Doctoral Examination, Yıldız Teknik Üniversitesi, March, 2019
Doctoral Examination, Doctoral Examination, İstanbul Teknik Üniversitesi, December, 2017
Post Graduate, Post Graduate, İstanbul Teknik Üniversitesi, November, 2017
Doctoral Examination, Doctoral Examination, İstanbul Teknik Üniversitesi, March, 2017
Post Graduate, Post Graduate, İstanbul Teknik Üniversitesi, May, 2015
Post Graduate, Post Graduate, İstanbul Teknik Üniversitesi, May, 2015

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Advanced temperature sensing with Er³⁺/Yb³⁺ co-doped Ba₂GdV₃O₁₁ phosphors through upconversion luminescence**
Kachou I., Saidi K., EKİM U., Dammak M., ÇELİKBİLEK ERSUNDU M., ERSUNDU A. E.
Dalton Transactions, vol.53, no.5, pp.2357-2372, 2024 (SCI-Expanded)
- II. **Glass-based LED system for indoor horticulture: enhanced plant growth through Sm³⁺ and Tm³⁺ co-doped luminescent glasses**
EKİM U., İlter E., Özcan E., Temürhan Y., ÇELİKBİLEK ERSUNDU M., ERSUNDU A. E.
Physical Chemistry Chemical Physics, vol.25, no.34, pp.23150-23163, 2023 (SCI-Expanded)
- III. **The coupling of blue emitting carbon dots with Eu³⁺/Tb³⁺ co-doped luminescent glasses for utilization in white light emitting diodes**
Korkmaz U., Özlem B., EROL E., Alas M. Ö., Genç Altürk R., ÇELİKBİLEK ERSUNDU M., ERSUNDU A. E.
Physical Chemistry Chemical Physics, vol.25, no.16, pp.11452-11463, 2023 (SCI-Expanded)
- IV. **Thermal, optical, structural, and electrical properties of ZnO-MoO₃-TeO₂ glasses**
ÇELİKBİLEK ERSUNDU M., ERSUNDU A. E., Bošák O., Kubliha M., Kostka P.
Ceramics International, vol.49, no.8, pp.12950-12958, 2023 (SCI-Expanded)
- V. **Bright white light emission from blue emitting carbon dot-coated Dy³⁺- doped luminescent glasses**
oezlem B., Korkmaz U., EROL E., Alai M. o., Meray Z., Altuerk R. G., Ersundu M., Ersundu A. E.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.926, 2022 (SCI-Expanded)
- VI. **Recyclability of CsPbBr₃ quantum dot glass nanocomposites for their long-standing use in white LEDs**
Vahedigharehchopogh N., EROL E., Kibrisli O., Genc A., ÇELİKBİLEK ERSUNDU M., ERSUNDU A. E.
JOURNAL OF MATERIALS CHEMISTRY C, vol.10, no.42, pp.16088-16099, 2022 (SCI-Expanded)
- VII. **Ultra-stable Eu³⁺/Dy(3+)co-doped CsPbBr₃ quantum dot glass nanocomposites with tunable luminescence properties for phosphor-free WLED applications**
EROL E., Vahedigharehchopogh N., EKİM U., Uza N., ÇELİKBİLEK ERSUNDU M., ERSUNDU A. E.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.909, 2022 (SCI-Expanded)
- VIII. **Synthesis and characterization of newly developed phosphate-based glasses through experimental gamma-ray and neutron spectroscopy methods: Transmission and dose rates**
KAVAZ E., Ersundu M., ERSUNDU A. E., Tekin H.
CERAMICS INTERNATIONAL, vol.48, no.10, pp.13842-13849, 2022 (SCI-Expanded)
- IX. **CdSe and CsPbBr₃ quantum dot Co-doped monolithic glasses as tunable wavelength convertors**
Kibrisli O., Erol E., ERSUNDU A. E., Ersundu M.
JOURNAL OF PHYSICS D-APPLIED PHYSICS, vol.55, no.10, 2022 (SCI-Expanded)
- X. **Structural properties and dissolution behavior of new generation controlled release phosphate**

glass fertilizers

ÇELİKBILEK ERSUNDU M., Kuzu B., ERSUNDU A. E.

JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.576, 2022 (SCI-Expanded)

- XI. **Color tunable emission from Eu³⁺ and Tm³⁺ co-doped CsPbBr₃ quantum dot glass nanocomposites**
Erol E., Kibrisli O., Ersundu M., ERSUNDU A. E.

PHYSICAL CHEMISTRY CHEMICAL PHYSICS, vol.24, no.3, pp.1486-1495, 2022 (SCI-Expanded)

- XII. **Recent progress in lanthanide-doped luminescent glasses for solid-state lighting applications-a review**

EROL E., Vahedigharehchopogh N., Kibrisli O., ÇELİKBILEK ERSUNDU M., ERSUNDU A. E.

JOURNAL OF PHYSICS-CONDENSED MATTER, vol.33, no.48, 2021 (SCI-Expanded)

- XIII. **Robust CsPbBr₃ and CdSe/Dy³⁺⁺CdSe quantum dot doped glass nanocomposite hybrid coupling as color converter for solid-state lighting applications**

Kibrisli O., Erol E., Çelikbilek Ersundu M., Ersundu A. E.

CHEMICAL ENGINEERING JOURNAL, vol.420, 2021 (SCI-Expanded)

- XIV. **Novel HMO-Glasses with Sb₂O₃ and TeO₂ for Nuclear Radiation Shielding Purposes: A Comparative Analysis with Traditional and Novel Shields**

Almisned G., Tekin H. O., Issa S. A. M., Ersundu M., Ersundu A. E., Kılıç G., Zakaly H. M. H., Ene A.

MATERIALS, vol.14, no.15, 2021 (SCI-Expanded)

- XV. **A thorough investigation of the Bi₂O₃-PbCl₂-TeO₂ system: Glass forming region, thermal, physical, optical, structural, mechanical and radiation shielding properties**

ERSUNDU A. E., Sayyed M., Kibrisli O., Akıllı V., ÇELİKBILEK ERSUNDU M.

JOURNAL OF ALLOYS AND COMPOUNDS, vol.857, 2021 (SCI-Expanded)

- XVI. **A straightforward approach for high-end anti-counterfeiting applications based on NIR laser-driven lanthanide doped luminescent glasses**

Vahedigharehchopogh N., Kibrisli O., Erol E., Çelikbilek Ersundu M., Ersundu A. E.

JOURNAL OF MATERIALS CHEMISTRY C, vol.9, no.6, pp.2037-2046, 2021 (SCI-Expanded)

- XVII. **Size-controlled emission of long-time durable CsPbBr₃ perovskite quantum dots embedded tellurite glass nanocomposites**

Erol E., Kibrisli O., Çelikbilek Ersundu M., Ersundu A. E.

CHEMICAL ENGINEERING JOURNAL, vol.401, 2020 (SCI-Expanded)

- XVIII. **Noninvasive Optical Temperature Sensing Behavior of Ho³⁺ and Ho³⁺/Er³⁺ Doped Tellurite Glasses Through Up and Down-Converted Emissions**

Kibrisli O., Erol E., Vahedigharehchopogh N., Yousef E. S., Çelikbilek Ersundu M., Ersundu A. E.

Sensors And Actuators A-Physical, vol.315, pp.112321, 2020 (SCI-Expanded)

- XIX. **The synergistic effect of Er³⁺ and Ho³⁺ on temporal color tuning of upconversion emission in a glass host via a facile excitation modulation technique for anti-counterfeiting applications**

Erol E., Kibrisli O., Vahedigharehchopogh N., Çelikbilek Ersundu M., Ersundu A. E.

PHYSICAL CHEMISTRY CHEMICAL PHYSICS, vol.22, no.44, pp.25963-25972, 2020 (SCI-Expanded)

- XX. **Investigation the effect of weathering on chemically strengthened flat glasses**

Gösterişlioğlu Y., Ersundu A. E., Çelikbilek Ersundu M., Sökmen İ.

Journal of Non-Crystalline Solids, vol.544, 2020 (SCI-Expanded)

- XXI. **A comparative study on WO₃ + MoO₃ containing TeO₂ and Sb₂O₃-based heavy metal oxide glasses**
ERSUNDU A. E., ÇELİKBILEK ERSUNDU M., Gedikoğlu N.

JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.541, 2020 (SCI-Expanded)

- XXII. **Instantaneous Color Tuning of Upconversion Emission in a Novel Lanthanide-Doped Monolithic Glass via Excitation Modulation**

Kibrisli O., Vahedigharehchopogh N., Ersundu A. E., Çelikbilek Ersundu M.

JOURNAL OF PHYSICAL CHEMISTRY C, vol.124, pp.10687-10695, 2020 (SCI-Expanded)

- XXIII. **A comparative investigation on thermal, structural and optical properties of W and Nb-doped VO₂-based thermochromic thin**

Ersundu A. E., Çelikbilek Ersundu M., Doğan E., Güven M.

- THIN SOLID FILMS, vol.700, 2020 (SCI-Expanded)
- XXIV. **Color tunability and white light generation through up-conversion energy transfer in Yb³⁺ sensitized Ho³⁺/Tm³⁺ doped tellurite glasses**
Vahedigharehchopogh N., Kibrislı O., Ersundu A. E., Çelikbilek Ersundu M.
Journal of Non-Crystalline Solids, vol.525, 2019 (SCI-Expanded)
- XXV. **Physical, mechanical and gamma-ray shielding properties of highly transparent ZnO-MoO₃-TeO₂ glasses**
Çelikbilek Ersundu M., Ersundu A. E., Gedikoglu N., Şakar E., Buyukyildiz M., Kurudirek M.
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.524, 2019 (SCI-Expanded)
- XXVI. **Dy³⁺ doped tellurite glasses for solid-state lighting: An investigation through physical, thermal, structural and optical spectroscopy studies**
Kibrislı O., Ersundu A. E., Çelikbilek Ersundu M.
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.513, pp.125-136, 2019 (SCI-Expanded)
- XXVII. **Crystallization behavior of WO₃-MoO₃-TeO₂ glasses**
Gedikoğlu N., Ersundu A. E., Aydin S., Çelikbilek Ersundu M.
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.501, pp.93-100, 2018 (SCI-Expanded)
- XXVIII. **Investigating the influence of transition metal oxides on temperature dependent optical properties of PbCl₂-TeO₂ glasses for their evaluation as transparent large band gap semiconductors**
Gedikoğlu N., Çelikbilek Ersundu M., Kostka P., Bašinová N., Ersundu A. E.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.748, pp.687-693, 2018 (SCI-Expanded)
- XXIX. **The effect of UV exposure and heat treatment on crystallization behavior of photosensitive glasses**
Kibrislı O., Ersundu A. E.
APPLIED PHYSICS A-MATERIALS SCIENCE & PROCESSING, vol.124, 2018 (SCI-Expanded)
- XXX. **Investigation on gamma and neutron radiation shielding parameters for BaO/SrO-Bi₂O₃-B₂O₃ glasses**
Sayyed M. I., Lakshminarayana G., Dong M. G., Çelikbilek Ersundu M., Ersundu A. E., Kityk I. V.
RADIATION PHYSICS AND CHEMISTRY, vol.145, pp.26-33, 2018 (SCI-Expanded)
- XXXI. **The heavy metal oxide glasses within the WO₃-MoO₃-TeO₂ system to investigate the shielding properties of radiation applications**
Ersundu A. E., Buyukyildiz M., Çelikbilek Ersundu M., Şakar E., Kurudirek M.
PROGRESS IN NUCLEAR ENERGY, vol.104, pp.280-287, 2018 (SCI-Expanded)
- XXXII. **Investigation of radiation shielding properties for MeO-PbCl₂-TeO₂ (MeO = Bi₂O₃, MoO₃, Sb₂O₃, WO₃, ZnO) glasses**
Sayyed M. I., Çelikbilek Ersundu M., Ersundu A. E., Lakshminarayana G., Kostka P.
RADIATION PHYSICS AND CHEMISTRY, vol.144, pp.419-425, 2018 (SCI-Expanded)
- XXXIII. **Evaluation of physical, structural properties and shielding parameters for K₂O-WO₃-TeO₂ glasses for gamma ray shielding applications**
Çelikbilek Ersundu M., Ersundu A. E., Sayyed M. I., Lakshminarayana G., Aydin S.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.714, pp.278-286, 2017 (SCI-Expanded)
- XXXIV. **Investigation of gamma radiation shielding properties of lithium zinc bismuth borate glasses using XCOM program and MCNP5 code**
Dong M. G., Sayyed M. I., Lakshminarayana G., Çelikbilek Ersundu M., Ersundu A. E., Nayar P., Mahdi M. A.
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.468, pp.12-16, 2017 (SCI-Expanded)
- XXXV. **Crystallization kinetics of new heavy metal oxide glasses within the Sb₂O₃-Na₂O-WO₃-PbO system**
Çelikbilek Ersundu M., Ersundu A. E., Soltani M. T., Baazouzi M.
CERAMICS INTERNATIONAL, vol.43, pp.491-497, 2017 (SCI-Expanded)
- XXXVI. **Structure and crystallization kinetics of lithium tellurite glasses**
Çelikbilek Ersundu M., Ersundu A. E.
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.453, pp.150-157, 2016 (SCI-Expanded)
- XXXVII. **The TeO₂-Na₂O System: Thermal Behavior, Structural Properties, and Phase Equilibria**
Kavaklıoğlu K. B., Aydin S., Çelikbilek M., Ersundu A. E.

- INTERNATIONAL JOURNAL OF APPLIED GLASS SCIENCE, vol.6, pp.406-418, 2015 (SCI-Expanded)
- XXXVIII. Thermochromic behavior of tellurite glasses**
 Celikbilek M., ERSUNDU A. E., Zayim E., Aydin S.
 JOURNAL OF ALLOYS AND COMPOUNDS, vol.637, pp.162-170, 2015 (SCI-Expanded)
- XXXIX. Characterization of new Sb₂O₃-based multicomponent heavy metal oxide glasses**
 Ersundu A. E., Çelikbilek M., Baazouzi M., Soltani M. T., Troles J., Aydin S.
 JOURNAL OF ALLOYS AND COMPOUNDS, vol.615, pp.712-718, 2014 (SCI-Expanded)
- XL. Preparation and characterization of TeO₂-WO₃-Li₂O glasses**
 Çelikbilek M., Ersundu A. E., Aydin S.
 JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.378, pp.247-253, 2013 (SCI-Expanded)
- XLI. Glass Formation and Characterization Studies in the TeO₂-WO₃-Na₂O System**
 Çelikbilek M., Ersundu A. E., Aydin S.
 JOURNAL OF THE AMERICAN CERAMIC SOCIETY, vol.96, pp.1470-1476, 2013 (SCI-Expanded)
- XLII. Thermal and microstructural characterization and crystallization kinetic studies in the TeO₂-B₂O₃ system**
 Yardimci D., Çelikbilek M., Ersundu A. E., Aydin S.
 MATERIALS CHEMISTRY AND PHYSICS, vol.137, pp.999-1006, 2013 (SCI-Expanded)
- XLIII. Phase equilibria and glass formation studies in the (1-x)TeO₂-xCdO (0.05 <= x <= 0.33 mol) system**
 Karaduman G., Ersundu A. E., Celikbilek M., Solak N., Aydin S.
 JOURNAL OF THE EUROPEAN CERAMIC SOCIETY, vol.32, no.3, pp.603-610, 2012 (SCI-Expanded)
- XLIV. Characterization of B₂O₃ and/or WO₃ containing tellurite glasses**
 Ersundu A. E., Çelikbilek M., Aydin S.
 JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.358, pp.641-647, 2012 (SCI-Expanded)
- XLV. Glass formation area and characterization studies in the CdO-WO₃-TeO₂ ternary system**
 Ersundu A. E., Celikbilek M., Solak N., Aydin S.
 JOURNAL OF THE EUROPEAN CERAMIC SOCIETY, vol.31, no.15, pp.2775-2781, 2011 (SCI-Expanded)
- XLVI. Investigation on thermal and microstructural characterization of the TeO₂-WO₃ system**
 Celikbilek M., Ersundu A. E., Solak N., Aydin S.
 JOURNAL OF ALLOYS AND COMPOUNDS, vol.509, no.18, pp.5646-5654, 2011 (SCI-Expanded)
- XLVII. Crystallization kinetics of the tungsten-tellurite glasses**
 Celikbilek M., Ersundu A. E., Solak N., Aydin S.
 JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.357, no.1, pp.88-95, 2011 (SCI-Expanded)
- XLVIII. Stability of the delta-TeO₂ phase in the binary and ternary TeO₂ glasses**
 Ersundu A. E., Karaduman G., Celikbilek M., Solak N., Aydin S.
 JOURNAL OF THE EUROPEAN CERAMIC SOCIETY, vol.30, no.15, pp.3087-3092, 2010 (SCI-Expanded)
- XLIX. Effect of rare-earth dopants on the thermal behavior of tungsten-tellurite glasses**
 Ersundu A. E., Karaduman G., Celikbilek M., Solak N., Aydin S.
 JOURNAL OF ALLOYS AND COMPOUNDS, vol.508, no.2, pp.266-272, 2010 (SCI-Expanded)

Articles Published in Other Journals

- I. **Sol-jel Yöntemi ile Sentezlenen Bor ve/veya Azot Katkılı TiO₂ Toz ve İnce Filmlerin Görünür ve Mor Ötesi Işık Altında Fotokatalitik Aktivitelerinin İncelenmesi**
 Ersundu A. E.
 Afyon Kocatepe Üniversitesi Fen ve Mühendislik Bilimleri Dergisi, vol.17, pp.227-238, 2017 (Peer-Reviewed Journal)
- II. **Microstructural and Thermal Characterization of the TeO₂-WO₃ System**
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Supported Projects

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AKYOL F., ERSUNDU A. E., ÇELİKBİLEK ERSUNDU M., NATH D. N., Project Supported by Higher Education Institutions, Düşük Basınçlı Kimyasal Buhar Biriktirme Sistemi Kullanılarak Üretilen Geniş Enerji Bant Aralıklı Ga203 Yarı İletkeniyle Elektronik Ve Optoelektronik Aygit Üretilmesi, 2023 - Continues

Ersundu A. E., Çelikbilek Ersundu M., TUBITAK Project, Katı hal aydınlatma sistemleri için lüminesans özellikli yeni nesil camların geliştirilmesi, 2020 - 2028

Ersundu A. E., Çelikbilek Ersundu M., TUBITAK Project, Yeni nesil güçlendirilmiş fonksiyonel ince cam ve cam seramiklerin geliştirilmesi, 2020 - 2028

Ersundu A. E., Çelikbilek Ersundu M., Yerci S., Günbaş E. G., Gürsel Dino İ., EU Supported Other Project, Power Generation from Perovskite Architectural Elements, 2023 - 2026

Çelikbilek Ersundu M., Ersundu A. E., Pv K., Horizon Europe Project, AgriPV system with climate, water and light spectrum control for safe, healthier and improved crops production, 2022 - 2026

Ünsür V., Ersundu A. E., Çelikbilek Ersundu M., TUBITAK Project, Environmentally friendly Aluminum Metal Paste for New Generation PERC, TOPCon and IBC Solar Cells' Back Contact Formation, 2022 - 2025

Ersundu A. E., Çelikbilek Ersundu M., TUBITAK Project, Development of Dual Quantum Dot-Doped Glass Nanocomposite-Based Luminescent Solar Concentrators, 2022 - 2024

Ersundu A. E., Çelikbilek Ersundu M., Genç A., Vahedigharehchopogh N., Erol E., Project Supported by Higher Education Institutions, Development of recyclable LEDs for sustainability in energy efficient lighting technologies, 2022 - 2023

ERSUNDU A. E., Ekim U., Project Supported by Higher Education Institutions, Samaryum ve Tulyum Katkılı Lüminesan Cam Bazlı LED'lerin İç Mekan Tarım Uygulamalarında Kullanımları ve Bitki Gelişimine Etkileri, 2022 - 2023

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Ersundu A. E., Çelikbilek Ersundu M., Korkmaz U., Özlem B., Project Supported by Higher Education Institutions, Development of rare earth element doped glasses reinforced with blue glowing carbon dots for white LED applications, 2022 - 2023

Ersundu A. E., CB Strateji ve Bütçe Başkanlığı (Kalkınma Bakanlığı) Projesi, Merkezi Araştırma Laboratuvarı İlave Altyapı, 2022 - 2023

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ERSUNDU A. E., EROL E., Project Supported by Higher Education Institutions, Katı Hal Aydınlatma Uygulamaları için CsPbBr₃ Perovskit Kuantum Nokta ve Lantanit Katkılı Cam Nanokompozitlerin Geliştirilmesi, 2021 - 2023

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ERSUNDU A. E., ÇELİKBİLEK ERSUNDU M., Project Supported by Higher Education Institutions, Fosfat Esaslı Kontrollü Salınımlı Cam Gübrelerin Geliştirilmesi, 2021 - 2022

ERSUNDU A. E., Kibrışlı O., Project Supported by Higher Education Institutions, İleri opto-elektronik uygulamalar için dalga boyu dönüştürücüler olarak lantanit ve/veya kuantum nokta katkılı luminesan cam ve cam nanokompozitler, 2020 - 2022

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ÇELİKBİLEK ERSUNDU M., ERSUNDU A. E., Gedikoğlu N., Project Supported by Higher Education Institutions, Geniş bant aralıklı kızılıtesi lazer camların geliştirilmesi, 2019 - 2021

ERSUNDU A. E., Gösterişlioğlu Y. A., Project Supported by Higher Education Institutions, Yaşılandırmanın Kimyasal Temperli İnce Düz Camlara Etkisinin İncelenmesi, 2019 - 2020

ERSUNDU A. E., Başak O., Project Supported by Higher Education Institutions, Geçiş Metal Oksit İceren Tellürit ve Antimonat Camların Elektriksel ve Yapısal Özelliklerinin İncelenmesi, 2019 - 2020

ERSUNDU A. E., ÇELİKBİLEK ERSUNDU M., Kibrışlı O., Project Supported by Higher Education Institutions, LED

uygulamaları için Ho2O₃, Er₂O₃, Tm₂O₃ içeren çok bileşenli camların işma özelliklerinin incelenmesi, 2018 - 2020

Ersundu A. E., Çelikbilek Ersundu M., TUBITAK Project, Yüksek aydınlatma verimli beyaz LED eldesi amacıyla kuantum nokta ve nadir toprak elementi ikili katkısının tellürit nanokompozit camların işma ve renk özelliklerine etkisinin incelenmesi, 2017 - 2020

ERSUNDU A. E., Akıllı V., Project Supported by Higher Education Institutions, Bizmut Oksit-Kurşun Klorür-Tellür Oksit Sisteminin Isıl, Optik ve Yapısal Açıdan İncelenerek Camlaşma Davranışlarının Belirlenmesi ve Camların Radyasyon Zırhlama Özelliklerinin İncelenmesi, 2018 - 2019

ÇELİKBİLEK ERSUNDU M., YÜKSELİCİ M. H., ERSUNDU A. E., Project Supported by Higher Education Institutions, II-VI Kuantum Noktaların Soda-Kireç ve Boro-Silikat Camlarda Kontrollü Kristalizasyonu ve Kuantum Kısıtlama Özelliklerinin İncelenmesi, 2017 - 2019

Ersundu A. E., Çelikbilek Ersundu M., TUBITAK Project, Investigation of the effect of structural transformations on electrical conduction properties of transition metal oxide-doped heavy metal oxide glasses, 2017 - 2019

Çelikbilek Ersundu M., Ersundu A. E., Technopark, Türkiye Cam Sektörünün Mevcut Durumu ve Cam Sektörü Açısından Üniversite Sanayi İş Birliği Yol Haritası, 2018 - 2018

ERSUNDU A. E., Doğan E., Project Supported by Higher Education Institutions, Binalarda Enerji Tasarrufu Sağlayan Niobyum Katkılı Vanadyum Dioksit Esash Termokromik İnce Filmlerin Geliştirilmesi ve Karakterizasyonu, 2017 - 2018

ERSUNDU A. E., KIBRISLI O., YÜKSELİCİ M. H., ÇELİKBİLEK ERSUNDU M., Project Supported by Higher Education Institutions, İşığa Duyarlı Camlarda Bragg Izgaraların Oluşturulması ve Karakterizasyonu, 2017 - 2018

ERSUNDU A. E., Project Supported by Higher Education Institutions, Sol-jel yöntemi ile tungsten katkılı VO₂ esaslı ince film kaplamaların geliştirilmesi ve termokromik özelliklerinin belirlenmesi, 2015 - 2018

ERSUNDU A. E., Project Supported by Higher Education Institutions, TUNGSTEN KATKILI VO₂ ESASLI TERMOKROMİK İNCE FİLM KAPLAMALI CAMLARIN GELİŞTİRİLMESİ VE KARAKTERİZASYONU, 2016 - 2017

ERSUNDU A. E., Project Supported by Higher Education Institutions, Üç Boyutlu Faz Hologram Uygulamaları İçin Foto-Termo-Refraktif Camların Geliştirilmesi ve Karakterizasyonu, 2016 - 2017

Ersundu A. E., Yükselici M. H., Development Agency, Hologram Araştırma ve Eğitim Laboratuvarı, 2015 - 2017

Ersundu A. E., Çelikbilek Ersundu M., KOSGEB, Kimyasal temperlenmiş yüksek mekanik dayanıklı camlar, 2014 - 2016

Ersundu A. E., Çelikbilek Ersundu M., TUBITAK Project, İyon değişim prosesi ile kimyasal temperlenmiş yüksek mekanik dayanıklı camlar, 2015 - 2015

Çelikbilek Ersundu M., Ersundu A. E., KOSGEB, Enerji Tasarrufu Sağlayan Termokromik Kaplamalı Akıllı Camların Geliştirilmesi, 2013 - 2015

Ersundu A. E., Aydın S., TUBITAK Project, İyon Değişim Prosesi ile Silika Esash Camlara Antibakteriyel Özellik Kazandırılması ve Camların Antibakteriyel Aktivitelerinin ve Yüzey Özelliklerinin İncelenmesi, 2013 - 2015

Ersundu A. E., Çelikbilek Ersundu M., Aydın S., Project Supported by Higher Education Institutions, Soda Kireç Camlara İyon Değişim Prosesi ile Antibakteriyel Özellik Kazandırılması, 2013 - 2015

Ersundu A. E., Çelikbilek Ersundu M., Project Supported by Other Official Institutions, Sıcaklık Etkisiyle Optik Özellik Değiştiren Yeni Nesil Termokromik Kaplamalı Akıllı Camlar, 2013 - 2014

Aydın S., Zayıf E., TUBITAK Project, Termokromik Uygulamalarda Kullanım Amacıyla Alkali Oksit Katkılı Tungsten-Tellürit Cam Sistemlerin Geliştirilmesi Ve Termal, Yapışsal, Spektroskopik Açıdan İncelenmesi, 2011 - 2013

Ersundu A. E., Çelikbilek Ersundu M., Aydın S., Project Supported by Higher Education Institutions, Sodyum-Tellürit Camların Termokromik Uygulamalarda Kullanımı Amacıyla Geliştirilmesi ve Sistemin Termal, Yapışsal ve Spektroskopik Açıdan İncelenmesi, 2011 - 2013

Ersundu A. E., Aydın S., Project Supported by Higher Education Institutions, TeO₂-WO₃-CdO Sisteminin Termodinamik ve Kinetik İncelenmesi, 2011 - 2011

Aydın S., Öveçoğlu M. L., Eryürek G., TUBITAK Project, Fiber Optik Kuvvetlendirici Ve Lazer Uygulamalarında Kullanılan TeO₂-WO₃-CdO Sisteminde Faz Dengelerinin Tespiti Ve Sistemin Termodinamik - Optik İncelenmesi, 2008 - 2010

Ersundu A. E., Aydın S., Yücel O., CB Strateji ve Bütçe Başkanlığı (Kalkınma Bakanlığı) Projesi, Yerli Kaynaklardan Yararlanarak Çelik Üretimi İçin Alternatif Hammadde - Sünger Demir - Üretimi ve Kullanımı, 2005 - 2007

Metrics

Publication: 138

Citation (WoS): 971

Citation (Scopus): 1592

H-Index (WoS): 19

H-Index (Scopus): 22

Congress and Symposium Activities

Şişecam International Glass Conference combined with 34th Şişecam Glass Symposium, Moderator, İstanbul, Turkey, 2019

International Materials Technologies and Metallurgy Conference 2019 (MTM 2019), Working Group, İstanbul, Turkey, 2019

YUCOMAT&WRTCS 2019, Working Group, Podgorica, Serbia And Montenegro, 2019

17th Young Researchers' Conference Materials Science and Engineering, Working Group, Belgrade, Serbia And Montenegro, 2018

33rd Şişecam Glass Symposium, Working Group, İstanbul, Turkey, 2018

34th International Physics Congress of the Turkish Physical Society, Working Group, Muğla, Turkey, 2018

15th International Conference on the Physics of Non-Crystalline Solids & 14th European Society of Glass Conference, Working Group, Brittany, France, 2018

International Conference on Advances and Innovations in Engineering - ICAIE, Working Group, Elazığ, Turkey, 2017

Ulusal Holografi Konferansı 2016, Working Group, İstanbul, Turkey, 2016

24th International Congress on Glass, Working Group, Shanghai, China, 2016

9th Ceramic Congress With International Participation, Working Group, Afyon, Turkey, 2015

TMS 2015 144th Annual Meeting & Exhibition, Working Group, Florida, United States Of America, 2015

17th International Metallurgy & Materials Congress - IMMC 2014, Working Group, İstanbul, Turkey, 2014

12th ESG Conference, Working Group, Parma, Italy, 2014
23rd International Congress on Glass, Working Group, Praha, Czech Republic, 2013
Materials Science and Technology Conference and Exhibition - MS&T'12, Working Group, Pennsylvania, United States Of America, 2012
16th International Metallurgy & Materials Congress - IMMC 2012, Working Group, İstanbul, Turkey, 2012
Materials Science and Technology Conference and Exhibition - MS&T'11, Attendee, Ohio, United States Of America, 2011
2nd International Ceramic, Glass, Porcelain, Enamel, Glaze and Pigment Congress - SERES'11, Working Group, Eskişehir, Turkey, 2011
17th International Symposium on Boron, Borides and Related Materials - ISBB 2011, Working Group, İstanbul, Turkey, 2011
3rd International Congress on Ceramics - ICC'3, Working Group, Osaka, Japan, 2010
Materials Science and Technology Conference and Exhibition - MS&T'10, Attendee, Texas, United States Of America, 2010
1st International Ceramic, Glass, Porcelain, Enamel, Glaze and Pigment Congress - SERES'09, Working Group, Eskişehir, Turkey, 2009
11th International Conference and Exhibition of the European Ceramic Society - ECERS 2009, Working Group, Krakow, Poland, 2009
TMS 2009 138th Annual Meeting & Exhibition, Working Group, California, United States Of America, 2009
14th International Metallurgy & Materials Congress - IMMC 2008, Working Group, İstanbul, Turkey, 2008
TMS 2008 137th Annual Meeting & Exhibition, Working Group, Louisiana, United States Of America, 2008
4. Demir Çelik Kongresi, Working Group, Karabük, Turkey, 2007
13th International Metallurgy & Materials Congress - IMMC 2006, Working Group, İstanbul, Turkey, 2006

Awards

Ersundu A. E., Odtü Parlar Vakfı Araştırma Teşvik Ödülü, Odtü Prof. Dr. Mustafa N. Parlar Eğitim Ve Araştırma Vakfı, February 2023
Ersundu A. E., Turkish Academy of Sciences (TÜBA) Outstanding Young Scientists Award (GEBİP), Türkiye Bilimler Akademisi, December 2021
ERSUNDU A. E., Best Oral Presentation Award, Materials Research Society of Serbia - 17YRC 2018, December 2018
ERSUNDU A. E., İTÜ 2013 Yılı En Başarılı Tez Ödülü, İstanbul Teknik Üniversitesi, June 2014
ERSUNDU A. E., Metalik Fikirler II. Arge Proje Pazarı, Öğrenci Kategorisi Birincisi, Metalik Fikirler II. Arge Proje Pazarı, November 2013

Non Academic Experience

Güvenli Cam Araştırma Geliştirme Müh. San. Tic. Ltd. Şti.