

Prof. Miray ÇELİKBİLEK ERSUNDU

Personal Information

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International Researcher IDs

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Biography

Prof. Dr. Miray Çelikbilek Ersundu received her BSc, MSc and PhD degrees from Istanbul Technical University, Department of Metallurgical and Materials Engineering in 2008, 2009 and 2013, respectively. In 2014, she started to work as a faculty member in the Department of Metallurgical and Materials Engineering at Yıldız Technical University. She was awarded the title of associate professor and full professor in 2018 and 2023, respectively. She continues to carry out her research at the Glass Research Laboratory of which she is the co-founder.

Prof. Dr. Miray Çelikbilek Ersundu is in the vision of developing solutions for the main problems of today's world such as, energy efficiency, recycling, and carbon emissions, by using the new generation glass and glass-ceramics developed for many advanced technological application areas. Recently, she has focused on glass and glass nanocomposites with color conversion properties, and by synthesizing lanthanides and quantum dots together directly in thermally and chemically durable glass matrices, she prevented the stability and decay problems of quantum dots and ensured that the light properties were preserved for a long time. She paved the way for the integration of glass and glass nanocomposites into next-generation opto-electronic and photonic applications such as solid-state lighting (LED), luminescent solar concentrators for use in building integrated photovoltaics, three-dimensional volumetric displays, optical temperature sensors and anti-counterfeiting applications.

To date, Prof. Dr. Miray Çelikbilek Ersundu has worked as the principal investigator in 5 TUBITAK (1 International), 1 Ministry of Industry, 1 KOSGEB, 16 BAP projects, and as a researcher in 1 Horizon Europe, 7 TUBITAK (1 International), 1 KOSGEB and 11 BAP projects. She has 50 articles published in internationally indexed journals, 3 international book chapters, 77 international and 7 national conference presentations. As of August 2023, her articles were cited 1888 times according to the Google Scholar citation index (h-index 23), and 1447 times according to the web of science index (h-index 21). In addition, she has 3 national and international patent applications that are still under examination.

In 2022, she was deemed worthy of the Turkish Academy of Sciences (TÜBA)-Outstanding Young Scientist (GEBİP) award and became a member of the TÜBA Young Academy.

Miray Çelikbilek Ersundu is married and has one little boy named Demir.

Education Information

Doctorate, Istanbul Technical University, Kimya Metalurji Fakültesi, Metalurji Ve Malzeme Mühendisliği Bölümü, Turkey
2009 - 2013

Postgraduate, Istanbul Technical University, Kimya Metalurji Fakültesi, Metalurji Ve Malzeme Mühendisliği Bölümü,
Turkey 2008 - 2009

Undergraduate, Istanbul Technical University, Kimya Metalurji Fakültesi, Metalurji Ve Malzeme Mühendisliği Bölümü,
Turkey 2004 - 2008

Foreign Languages

French, C1 Advanced

English, B2 Upper Intermediate

Dissertations

Doctorate, Tellürit Sistemlerin Camlaşma Davranışlarının, Cam Özelliklerinin ve Termokromik Davranışlarının
İncelenmesi, İstanbul Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Metalurji Ve Malzeme Mühendisliği, 2013

Postgraduate, TeO₂-WO₃ Sisteminin Termal ve Mikroyapısal İncelenmesi, İstanbul Teknik Üniversitesi, Fen Bilim
Enstitüsü, Üretim Metalurjisi , 2009

Research Areas

Metallurgical and Materials Engineering, Material science and engineering, Optical Properties, Electrical and Magnetic
Properties, Glass Technology and Glass Ceramics, Nanomaterials, Thermal Properties, Engineering and Technology

Academic Titles / Tasks

Professor, Yıldız Technical University, Faculty Of Chemical And Metallurgical Engineering, Department Of Metallurgical
And Materials Engineering, 2023 - Continues

Associate Professor, Yıldız Technical University, Faculty Of Chemical And Metallurgical Engineering, Department Of
Metallurgical And Materials Engineering, 2018 - 2023

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

Courses

Graduation Project, Undergraduate, 2018 - 2019

Seramik Teknolojilerinde Tasarım Uygulamaları, Undergraduate, 2019 - 2020, 2018 - 2019

Basic Metallurgical Diagrams, Postgraduate, 2018 - 2019, 2017 - 2018, 2016 - 2017

Principles of Extractive Metallurgy, Undergraduate, 2018 - 2019

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

Thermodynamics of Solution, Undergraduate, 2018 - 2019
Üretim Metalurjisi Termodinamiği , Doctorate, 2017 - 2018
Thermodynamics of Materials, Undergraduate, 2018 - 2019
Metallurgy Kinetics, Undergraduate, 2018 - 2019
Materials Thermodynamics 2, Undergraduate, 2017 - 2018, 2016 - 2017, 2015 - 2016
Principles of Extractive Metallurgy , Undergraduate, 2017 - 2018, 2016 - 2017, 2015 - 2016
Kinetics, Undergraduate, 2016 - 2017, 2015 - 2016
Metalurji Laboratuvarı, Undergraduate, 2017 - 2018, 2016 - 2017, 2015 - 2016
Ore Dressing, Undergraduate, 2017 - 2018, 2016 - 2017
Tasarım Uygulamaları, Undergraduate, 2017 - 2018, 2016 - 2017, 2015 - 2016
Bitirme Çalışması, Undergraduate, 2016 - 2017, 2015 - 2016, 2014 - 2015
Materials Thermodynamics 1, Undergraduate, 2017 - 2018, 2016 - 2017, 2015 - 2016
Glass Technology, Undergraduate, 2015 - 2016, 2014 - 2015
Hydrometallurgy, Undergraduate, 2014 - 2015

Advising Theses

Çelikbilek Ersundu M., Cam Seramik Malzemelerin Kimyasal Temperleme ile Güçlendirilmesi, Doctorate, A.Caner(Student), Continues
Çelikbilek Ersundu M., Development of ZrO₂-SiO₂ glass ceramics and investigation of their optical and mechanical properties, Doctorate, Y.Çelik(Student), Continues
Çelikbilek Ersundu M., Development of NIR Excited Lanthanide-Doped Monolithic Glasses For Volumetric Displays, Doctorate, N.Vahedighrehchopogh(Student), Continues
Çelikbilek Ersundu M., Enerji Tasarrufu Sağlayan Low-E Kaplamalı Camların Geliştirilmesi, Postgraduate, H.Can(Student), Continues
Çelikbilek Ersundu M., Üst enerji dönüşüm yöntemi ile lüminesans özellikli nadir toprak elementi katkılı camların geliştirilmesi, Doctorate, B.Özlem(Student), Continues
Çelikbilek Ersundu M., Investigation the effect of electric field assisted ion exchange process on chemical tempering efficiency, Postgraduate, Ö.Doğukan(Student), Continues
Çelikbilek Ersundu M., İnce Camların Kimyasal Temperleme Prosesine Banyo Kirliliğinin Etkilerinin İncelenmesi ve Banyo Tuzunun Rejenerasyonu , Doctorate, N.Özben(Student), Continues
Çelikbilek Ersundu M., Fosfat -Esaslı Camların Çözünme Davranışlarının İncelenmesi ve Kontrollü Salımlı Gübre Olarak Kullanılabilirliklerinin Araştırılması, Postgraduate, B.Kuzu(Student), 2021
Çelikbilek Ersundu M., Fotovoltaik sistemlerde kullanılan desenli ince camların kimyasal temperlenmesi, Postgraduate, G.Terzi(Student), 2020
Çelikbilek Ersundu M., İnce Camların Kimyasal Temperlenmesi, Postgraduate, B.Demir(Student), 2020
Çelikbilek Ersundu M., Investigation of Luminescence and Up-conversion Properties of Holmium, Thulium and Ytterbium Ions Triply-doped Tellurite Glasses, Postgraduate, N.Vahedighrehchopogh(Student), 2020
Çelikbilek Ersundu M., Farklı Al₂O₃ Oranlarına Sahip Alümina Silikat ve Soda Kireç Silikat Camların Kimyasal Temperlenme Davranışlarının İncelenmesi, Postgraduate, A.Caner(Student), 2019
Çelikbilek Ersundu M., Alümina Silikat ve Soda Kireç Silikat Camların Kimyasal Temperlenmesinde Kalınlık ve Kesme Etkisinin İncelenmesi, Postgraduate, B.Kayacan(Student), 2018
Çelikbilek Ersundu M., Synthesis and Investigation of Transition Metal Oxide-doped Heavy Metal Oxide Glasses for Their Evaluation as Large Band Gap Semiconductors, Postgraduate, N.Gedikoğlu(Student), 2018
Çelikbilek Ersundu M., ZnTe Kuantum Nokta Katkılı Camların Geliştirilmesi ve Kuantum Kısıtlama Özelliklerinin İncelenmesi, Postgraduate, İ.Tunç(Student), 2017

Research Infrastructure Information

Çelikkbilek Ersundu M., Ersundu A. E., Cam Araştırma Laboratuvarı, November 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**
özlem 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**
ÇELİKBİLEK 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., ÇELİKBİLEK 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

Kıbrıslı 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**
Almised 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., Kıbrıslı O., Akıllı V., ÇELİKBİLEK 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., Kıbrıslı 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., Kıbrıslı 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**
Kıbrıslı 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., Kıbrıslı O., Vahedigharehchopogh N., Çelikbilek Ersundu M., Ersundu A. E.
PHYSICAL CHEMISTRY CHEMICAL PHYSICS, vol.22, no.44, pp.25963-25972, 2020 (SCI-Expanded)
- XX. **Stress in ion exchanged soda-lime silicate and sodium aluminosilicate glasses: Experimental and theoretical comparison**
Macrelli G., Özben N., Kayaalp A. C., ÇELİKBİLEK ERSUNDU M., Sökmen İ.
International Journal of Applied Glass Science, vol.11, no.4, pp.730-742, 2020 (SCI-Expanded)
- XXI. **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)
- XXII. **A comparative study on WO₃ + MoO₃ containing TeO₂ and Sb₂O₃-based heavy metal oxide glasses**
ERSUNDU A. E., ÇELİKBİLEK ERSUNDU M., Gedikoğlu N.
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.541, 2020 (SCI-Expanded)
- XXIII. **Instantaneous Color Tuning of Upconversion Emission in a Novel Lanthanide-Doped Monolithic Glass via Excitation Modulation**
Kıbrıslı O., Vahedigharehchopogh N., Ersundu A. E., Çelikbilek Ersundu M.
JOURNAL OF PHYSICAL CHEMISTRY C, vol.124, pp.10687-10695, 2020 (SCI-Expanded)
- XXIV. **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)
- XXV. **Color tunability and white light generation through up-conversion energy transfer in Yb³⁺ sensitized Ho³⁺/Tm³⁺ doped tellurite glasses**
Vahedigharehchopogh N., Kıbrıslı O., Ersundu A. E., Çelikbilek Ersundu M.
Journal of Non-Crystalline Solids, vol.525, 2019 (SCI-Expanded)
- XXVI. **Physical, mechanical and gamma-ray shielding properties of highly transparent ZnO-MoO₃-TeO₂ glasses**

- Çelikbilek Ersundu M., Ersundu A. E., Gedikoglu N., Şakar E., Buyiikyildiz M., Kurudirek M.
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.524, 2019 (SCI-Expanded)
- XXVII. **Dy³⁺ doped tellurite glasses for solid-state lighting: An investigation through physical, thermal, structural and optical spectroscopy studies**
Kibrisli O., Ersundu A. E., Çelikbilek Ersundu M.
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.513, pp.125-136, 2019 (SCI-Expanded)
- XXVIII. **Crystallization behaviour and growth kinetics of ZnTe in soda-lime-silica glass nanocomposites**
Ersundu M.
PHYSICS AND CHEMISTRY OF GLASSES-EUROPEAN JOURNAL OF GLASS SCIENCE AND TECHNOLOGY PART B, vol.60, pp.15-20, 2019 (SCI-Expanded)
- XXIX. **Crystallization behavior of W₀₃-Mo₀₃-Te₀₂ glasses**
Gedikoğlu N., Ersundu A. E., Aydın S., Çelikbilek Ersundu M.
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.501, pp.93-100, 2018 (SCI-Expanded)
- XXX. **Investigating the influence of transition metal oxides on temperature dependent optical properties of PbCl₂-Te₀₂ 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)
- XXXI. **The heavy metal oxide glasses within the W₀₃-Mo₀₃-Te₀₂ 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 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)
- XXXIII. **Investigation of radiation shielding properties for MeO-PbCl₂-Te₀₂ (MeO = Bi₂O₃, Mo₀₃, Sb₂O₃, W₀₃, 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)
- XXXIV. **Evaluation of physical, structural properties and shielding parameters for K₂O-W₀₃-Te₀₂ glasses for gamma ray shielding applications**
Çelikbilek Ersundu M., Ersundu A. E., Sayyed M. I., Lakshminarayana G., Aydın S.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.714, pp.278-286, 2017 (SCI-Expanded)
- XXXV. **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)
- XXXVI. **Crystallization kinetics of new heavy metal oxide glasses within the Sb₂O₃-Na₂O-W₀₃-PbO system**
Çelikbilek Ersundu M., Ersundu A. E., Soltani M. T., Baazouzi M.
CERAMICS INTERNATIONAL, vol.43, pp.491-497, 2017 (SCI-Expanded)
- XXXVII. **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)
- XXXVIII. **The Te₀₂-Na₂O System: Thermal Behavior, Structural Properties, and Phase Equilibria**
Kavaklioglu K. B., Aydın S., Çelikbilek M., Ersundu A. E.
INTERNATIONAL JOURNAL OF APPLIED GLASS SCIENCE, vol.6, pp.406-418, 2015 (SCI-Expanded)
- XXXIX. **Thermochromic behavior of tellurite glasses**
Çelikbilek M., ERSUNDU A. E., Zayim E., Aydın S.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.637, pp.162-170, 2015 (SCI-Expanded)
- XL. **Characterization of new Sb₂O₃-based multicomponent heavy metal oxide glasses**
Ersundu A. E., Çelikbilek M., Baazouzi M., Soltani M. T., Troles J., Aydın S.

- JOURNAL OF ALLOYS AND COMPOUNDS, vol.615, pp.712-718, 2014 (SCI-Expanded)
- XLII. **Preparation and and characterization of TeO₂-WO₃-Li₂O glasses**
Çelikkbilek M., Ersundu A. E., Aydın S.
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.378, pp.247-253, 2013 (SCI-Expanded)
- XLIII. **Glass Formation and Characterization Studies in the TeO₂-WO₃-Na₂O System**
Çelikkbilek M., Ersundu A. E., Aydın S.
JOURNAL OF THE AMERICAN CERAMIC SOCIETY, vol.96, pp.1470-1476, 2013 (SCI-Expanded)
- XLIII. **Thermal and microstructural characterization and crystallization kinetic studies in the TeO₂-B₂O₃ system**
Yardimci D., Çelikkbilek M., Ersundu A. E., Aydın S.
MATERIALS CHEMISTRY AND PHYSICS, vol.137, pp.999-1006, 2013 (SCI-Expanded)
- XLIV. **Phase equilibria and glass formation studies in the (1-x)TeO₂-xCdO (0.05 ≤ x ≤ 0.33 mol) system**
Karaduman G., Ersundu A. E., Celikkbilek M., Solak N., Aydın S.
JOURNAL OF THE EUROPEAN CERAMIC SOCIETY, vol.32, no.3, pp.603-610, 2012 (SCI-Expanded)
- XLV. **Characterization of B₂O₃ and/or WO₃ containing tellurite glasses**
Ersundu A. E., Çelikkbilek M., Aydın S.
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.358, pp.641-647, 2012 (SCI-Expanded)
- XLVI. **Glass formation area and characterization studies in the CdO-WO₃-TeO₂ ternary system**
Ersundu A. E., Celikkbilek M., Solak N., Aydın S.
JOURNAL OF THE EUROPEAN CERAMIC SOCIETY, vol.31, no.15, pp.2775-2781, 2011 (SCI-Expanded)
- XLVII. **Investigation on thermal and microstructural characterization of the TeO₂-WO₃ system**
Celikkbilek M., Ersundu A. E., Solak N., Aydın S.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.509, no.18, pp.5646-5654, 2011 (SCI-Expanded)
- XLVIII. **Crystallization kinetics of the tungsten-tellurite glasses**
Celikkbilek M., Ersundu A. E., Solak N., Aydın S.
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.357, no.1, pp.88-95, 2011 (SCI-Expanded)
- XLIX. **Stability of the delta-TeO₂ phase in the binary and ternary TeO₂ glasses**
Ersundu A. E., Karaduman G., Celikkbilek M., Solak N., Aydın S.
JOURNAL OF THE EUROPEAN CERAMIC SOCIETY, vol.30, no.15, pp.3087-3092, 2010 (SCI-Expanded)
- L. **Effect of rare-earth dopants on the thermal behavior of tungsten-tellurite glasses**
Ersundu A. E., Karaduman G., Celikkbilek M., Solak N., Aydın S.
JOURNAL OF ALLOYS AND COMPOUNDS, vol.508, no.2, pp.266-272, 2010 (SCI-Expanded)

Articles Published in Other Journals

- I. **Geçiş Metal Oksit Katkılı PbCl₂-TeO₂ Camların Yapısal ve Optik İncelenmesi**
Çelikkbilek Ersundu M.
Afyon Kocatepe Üniversitesi Fen ve Mühendislik Bilimleri Dergisi, vol.17, pp.218-226, 2017 (Peer-Reviewed Journal)
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LXXXI. Farklı Başlangıç Malzemeleri ve Isıl İşlem Koşullarının Termokromik VO₂ İnce Film Eldesine Etkisi

Özdemir Yanık M. C., Çelikbilek Ersundu M., Ersundu A. E., Aydın S.

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- I. **Tellürit Sistemlerin Camlaşma Davranışlarının, Cam Özelliklerinin ve Termokromik Davranışlarının İncelenmesi**
ÇELİKBİLEK ERSUNDU M.
Other, 2013
- II. **TeO₂-WO₃ Sisteminin Termal ve Mikroyapısal İncelenmesi**
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Other, 2009

Supported Projects

- 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
- 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
- Bilgin Eran B., Ocak H., Yılmaz Canlı N., Akdaş Kılıç H., Çelikbilek Ersundu M., TUBITAK Project, Yeni Agregasyon Kaynaklı Emisyon Aktif Kiral Sivi Kristal Malzemeler: Sentez, Mesomorfik, Fotofiziksel Ve Elektro-Optik Özelliklerin İncelenmesi, 2022 - 2024
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- 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
- ÇELİKBİLEK ERSUNDU M., BEDGE B., İLTER E., Project Supported by Higher Education Institutions, Sera üst cephelerinde kullanıma yönelik kırmızı ışığa özellikli Eu³⁺/Sm³⁺ katkılı lüminesans camların geliştirilmesi, 2022 - 2023
- 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
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ÇELİKBİLEK ERSUNDU M., KAYACAN B., Project Supported by Higher Education Institutions, Alümina Silikat ve Soda Kireç Silikat Camların Kimyasal Temperlemesinde Kalınlık ve Kesme Etkisinin İncelenmesi, 2018 - 2018

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ÇELİKBİLEK ERSUNDU M., Project Supported by Higher Education Institutions, Geçiş Metal Oksit Katkılı Ağır Metal Oksit Camların Geliştirilmesi , Optik ve Elektriksel Özelliklerinin İncelenmesi, 2016 - 2018

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

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

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

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Çelikkbilek Ersundu M., Aydın S., Project Supported by Higher Education Institutions, Tellürit Cam Sistemlerin Termokromik Özelliklerinin Araştırılması, 2013 - 2013

Aydın S., Zayim E., TÜBİTAK Project, Termokromik Uygulamalarda Kullanım Amacıyla Alkali Oksit Katkılı Tungsten-Tellürit Cam Sistemlerin Geliştirilmesi Ve Termal, Yapısal, Spektroskopik Açından İncelenmesi, 2011 - 2013

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

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

Çelikbilek Ersundu M., Aydın S., Project Supported by Higher Education Institutions, TeO2-WO3 Sisteminde Faz Dengelerinin Tespiti ve Sistemin Termodinamik - Mikroyapısal - Kinetik İncelenmesi, 2008 - 2008

Scientific Research / Working Group Memberships

Cam Araştırma Grubu, Yıldız Technical University, Türkiye, www.glass.yildiz.edu.tr, 2014 - Continues

Metrics

Publication: 138

Citation (WoS): 974

Citation (Scopus): 1602

H-Index (WoS): 19

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Awards

Çelikbilek Ersundu M., Turkish Academy of Sciences (TÜBA) Outstanding Young Scientists Award (GEBİP), Türkiye Bilimler Akademisi (Tüba) , November 2022

ÇELİKBİLEK ERSUNDU M., Metalik Fikirler II. Arge Proje Pazarı Birincilik Ödülü, İstanbul Demir ve Demirdışı Metaller İhracatçıları Birliği, November 2013

ÇELİKBİLEK ERSUNDU M., Hayatımın Fikri, Gençlik için Girişimcilik Birincilik Ödülü, AVEA & TOG, November 2009

ÇELİKBİLEK ERSUNDU M., 9. Yönetim Bilimleri Kongresi, İnovasyon Proje Yarışması Birincilik Ödülü, İstanbul Teknik Üniversitesi İşletme Mühendisliği, April 2008

Non Academic Experience

Akıllı Cam Araştırma Geliştirme Mühendislik Sanayi Ticaret Limited Şirketi
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