

Prof. Gönül Eryürek

Personal Information

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Address: İstanbul Teknik Üniversitesi, Fen-Edebiyat Fakültesi, Fizik Mühendisliği Bölümü, Maslak 34469, İstanbul

Education Information

Doctorate, Boston College, Faculty of Arts and Sciences, Physics Department, United States Of America 1984 - 1991

Under Graduate, Hacettepe University, Mühendislik Fakültesi, Fizik Mühendisliği Bölümü, Turkey 1978 - 1982

Dissertations

Doctorate, Energy transfer, Boston College, 1991

Research Areas

Technical Sciences, Electrical and Electronics Engineering, Energy, Lighting Technology, MEMS, Dielectric Materials and Devices, Lasers and Masers, Optical Materials and Devices, Metallurgical and Materials Engineering, Material science and engineering, Optical Properties, Glass Technology and Glass Ceramics, Thermal Properties, Basic Sciences, Physics, Condensed Matter 1: Structural, Mechanical and Thermal Properties, Surfaces, Interfaces, Thin Films and Nanosystems, Intensive Article 2: Electronic Structure, Electric, Magnetic and Optical Properties, Optical Properties, Spectroscopy of Matter

Academic Titles / Tasks

Professor, İstanbul Teknik Üniversitesi, Fen-Edebiyat Fakültesi, Fizik Mühendisliği Bölümü, 1994 - Continues

Professor, Boston College, Fen- Edebiyat/ , Fizik, 2011 - 2012

Professor, Boston College, Fizik Bölümü, Fizik, 2007 - 2007

Professor, Boston College, Fizik Bölümü, Fizik, 2003 - 2005

Professor, University Of Oxford, Fen- Edebiyat/ Inorganik Kimya Lab, Inorganik Kimya Lab, 1996 - 1996

Academic and Administrative Experience

İstanbul Teknik Üniversitesi, Fen-Edebiyat Fakültesi, Fizik Bölümü, 2016 - 2017

İstanbul Teknik Üniversitesi, Fen-Edebiyat Fakültesi, Fizik Bölümü, 2016 - 2017

Courses

OpticsII, Under Graduate, 2017 - 2018

OpticsI, Under Graduate, 2017 - 2018

QUANTUM MECHANİC-1, Under Graduate, 2016 - 2017

graduation project, Under Graduate, 2016 - 2017

Advising Theses

- Eryürek G., Color tunable upconversion based white light properties of er-Tm-Yb phosphors and pmma nanocomposites, Doctorate, S.TABANLI(Student), 2019
- Eryürek G., Nd³⁺ katkılı Y₂O₃ nano – fosforunun sentezi ve Işıma Özellikleri, Doctorate, G.BİLİR(Student), 2015
- Eryürek G., Tellurit camlarda beyaz ışık üretimi ve karakterizasyonu, Post Graduate, A.KAYA(Student), 2014
- Eryürek G., Rezonans Atomik Gazlarda Optik Pompalama ve Koherent Etkilerin Araştırılması, Doctorate, E.ŞAHİN(Student), 2014
- Eryürek G., The Effect of Erbium Ion Concentration on ZnSe Quantum Dot Doped SiO₂ Glass, Post Graduate, O.ERGÜZEL(Student), 2013
- Eryürek G., Tm₂O₃ ve Er₂O₃ Katkılı TeO₂-GeO₂ cam Malzemelerin Yapısal ve Spektroskopik Özelliklerinin İncelenmesi, Post Graduate, Y.PEPE(Student), 2013
- Eryürek G., Nd³⁺ katkılı Y₂Si₃O₅ nano – fosforun Üretimi, yapısal, termal ve Lazer Özellikleri, Doctorate, M.ERDEM(Student), 2012
- Eryürek G., ZnSe kuvantum noktaları ve Nd³⁺ ile katkılanmış Silika camlarının sentezi Karakterizasyonu ve Luminesans Özelliklerinin İncelenmesi, Post Graduate, T.ELBOUKHARI(Student), 2012
- Eryürek G., TeO₂ Esaslı Bazı Lazer Camlarında Tm³⁺ İyonunun Konsantrasyon Sönümü ile Cam Matrisin Kristallenme Kinetiği, Post Graduate, M.REHA(Student), 2006
- Eryürek G., Tellurit optik camlarında Tulyum iyonunun ışımaya olasılıklarına kurşunflorürün etkisi, Doctorate, İ.KABALCI(Student), 2006
- Eryürek G., He-Ne/I₂(633nm) Lazer Frekans Kararlılığı ve Mutlak Frekans Ölçümü, Post Graduate, E.ŞAHİN(Student), 2006
- Eryürek G., Bridgman Yöntemi ile CsCdBr₃ Tek Kristalinin Büyütülmesi ve Optik Özelliklerinin İncelenmesi, Post Graduate, O.YILMAZ(Student), 1998
- Eryürek G., La₃Lu₂GaO₁₂: Cr³⁺:Nd³⁺ Lazer Kristalinde Sıcaklığın Cr³⁺ Nd³⁺ Enerji Transferine Etkisi., Post Graduate, G.YILDIRIM(Student), 1998

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- I. **Enhanced gain bandwidth of Tm³⁺ and Er³⁺ doped tellurite glasses for broadband optical amplifier**
Pepe Y., ERDEM M., Sennaroglu A., Eryürek G.
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.522, 2019 (Journal Indexed in SCI)
- II. **The anomalous luminescent behaviors of the Nd³⁺/Yb³⁺ co-doped yttrium silicate at different physical conditions**
Çınkaya Yılmaz H., Eryürek G., Di Bartolo B.
LASER PHYSICS, vol.29, no.6, 2019 (Journal Indexed in SCI)
- III. **Crystalline phase effect on the up-conversion processes and white emission of Yb³⁺/Er³⁺/Tm³⁺:Y₂Si₂O₇ nanocrystals**
ERDEM M., Tabanlı S., Eryurek G., Samur R., Di Bartolo B.
DALTON TRANSACTIONS, vol.48, no.19, pp.6464-6472, 2019 (Journal Indexed in SCI)
- IV. **Upconversion luminescence properties of Y₂O₃: Yb³⁺ /Er³⁺ /Tm³⁺ nanocrystal doped PMMA nanocomposites**
Tabanlı S., Eryürek G.
JOURNAL OF NON-CRYSTALLINE SOLIDS, vol.505, pp.43-51, 2019 (Journal Indexed in SCI)
- V. **Optical investigation of Er³⁺ and Er³⁺/Yb³⁺ doped zinc-tellurite glass for solid-state lighting and optical thermometry**
Tabanlı S., Eryürek G.
SENSORS AND ACTUATORS A-PHYSICAL, vol.285, pp.448-455, 2019 (Journal Indexed in SCI)
- VI. **Excitation power and Er³⁺ concentration effect on the color quality parameters in Y₂O₃: Er³⁺/Yb³⁺/Tm³⁺ nanophosphors**

TABANLI S., ERYÜREK G.

Journal Of Nanophotonics, vol.12, 2018 (Journal Indexed in SCI)

- VII. **White light emission based on both upconversion and thermal processes from Nd³⁺ doped yttrium silicate**
Çinkaya Yılmaz H., Eryürek G., Di Bartolo B.
CERAMICS INTERNATIONAL, vol.44, no.4, pp.3541-3547, 2018 (Journal Indexed in SCI)
- VIII. **Optical properties and Judd-Ofelt analysis of Nd₂O₃ nanocrystals embedded in polymethyl methacrylate**
Tabanlı S., Bilir G., Eryürek G.
JOURNAL OF RARE EARTHS, vol.36, no.2, pp.170-178, 2018 (Journal Indexed in SCI)
- IX. **Near-Infrared Free-Radical and Free-Radical-Promoted Cationic Photopolymerizations by In-Source Lighting Using Upconverting Glass**
Kocaarslan A., Tabanlı S., Eryürek G., Yağcı Y.
ANGEWANDTE CHEMIE-INTERNATIONAL EDITION, vol.56, no.46, pp.14507-14510, 2017 (Journal Indexed in SCI)
- X. **White light emission from Er₂O₃ nano-powder excited by infrared radiation**
Tabanlı S., Eryürek G., DI BARTOLO B.
Optical Materials, vol.69, pp.207-213, 2017 (Journal Indexed in SCI Expanded)
- XI. **Color tunable up-conversion emission from Er³⁺:Y₂O₃ nanoparticles embedded in PMMA matrix**
Tabanlı S., Bilir G., Eryürek G.
JOURNAL OF LUMINESCENCE, vol.182, pp.146-153, 2017 (Journal Indexed in SCI)
- XII. **Effect of pressure and temperature on the white light produced by Ytterbium (III) doped and undoped Yttrium Silicate nanopowders excited by a laser diode**
Çinkaya H., ERYUREK G., Bilir G., Erdem M., Di Bartolo B.
JOURNAL OF LUMINESCENCE, vol.181, pp.321-326, 2017 (Journal Indexed in SCI)
- XIII. **Spectral characterization and white light generation by yttrium silicate nanopowders undoped and doped with Ytterbium(III) at different concentrations when excited by a laser diode at 975 nm**
Çinkaya H., ERYUREK G., Bilir G., Collins J., Di Bartolo B.
OPTICAL MATERIALS, vol.63, pp.167-172, 2017 (Journal Indexed in SCI)
- XIV. **Spectroscopic investigation of zinc tellurite glasses doped with Yb³⁺ and Er³⁺ ions**
Bilir G., KAYA A., CINKAYA H., Eryürek G.
SPECTROCHIMICA ACTA PART A-MOLECULAR AND BIOMOLECULAR SPECTROSCOPY, vol.165, pp.183-190, 2016 (Journal Indexed in SCI)
- XV. **Blue cooperative upconversion and white light emission from Y₂Si₂O₇:Yb³⁺ nanopowders due to 975-nm infrared excitation**
Eryürek G., CINKAYA H., Erdem M., Bilir G.
JOURNAL OF NANOPHOTONICS, vol.10, no.2, 2016 (Journal Indexed in SCI)

Supported Projects

Eryürek G., Project Supported by Higher Education Institutions, PMMA/nanofosfor Kompozit Malzemelerden Üretilen İnce Filmlerin Lüminesans ve Işık Kılavuzlama Özellikleri, 2016 - 2018

Eryürek G., Project Supported by Higher Education Institutions, Yb +3, Nd +3, Tm +3 NADİR TOPRAK İYON KATKILI NANO FOSFOR MALZEMELERDE ÜST ENERJİ DÖNÜŞÜM MEKANİZMASINA DAYALI BEYAZ IŞIK ÜRETİMİ VE KARAKTERİZASYONU, 2015 - 2018

Eryürek G., Project Supported by Higher Education Institutions, Properties of Erbium Doped Cadmium Niobate Powders, 2014 - 2018

Eryürek G., Project Supported by Higher Education Institutions, Effect Of Nd³⁺ ions on The Crystallite Size Distribution of ZnSe dots 2 Glasses, 2013 - 2018

Eryürek G., Project Supported by Higher Education Institutions, Variation of Fluorescence Lifetimes and Judd ofelt Parameters Between Nd³⁺ Doped bulk and nanocrystalline, 2012 - 2018

Eryürek G., Project Supported by Higher Education Institutions, Y203:Nd3+ NANOFOSFOR MALZEMELERİNİN YAPI VE FOTOLÜMİNESANS ÖZELLİKLERİ, 2010 - 2018

Eryürek G., Project Supported by Higher Education Institutions, Tellürit Camlarda Beyaz Işık Üretimi ve karakterizasyonu, 2014 - 2017

Eryürek G., Project Supported by Higher Education Institutions, Geniş Spektrumlu Modüleli Lazer ile Rezonans Gazlarda Koherent Optik Olayların Araştırılması ve Atomik Saatlere Uygulanması, 2012 - 2015

Eryürek G., Project Supported by Higher Education Institutions, ZnSe Kuantum Noktaları ve Nd3+ ile Katkılanmış Silika Camlarının Sentezi Karakterizasyonu ve Luminesans Özelliklerinin İncelenmesi, 2012 - 2015

Eryürek G., Project Supported by Higher Education Institutions, Nd3+ Katkılı Y203 Nanofosfor Malzemeleri: Lüminesans ve Enerji Transfer Süreçlerinin İncelenmesi, 2010 - 2015

Eryürek G., Project Supported by Higher Education Institutions, Tellürit optik camlarında Tulyum iyonunun ışıma oluşıklarına kurşun florürün etkisi, 2004 - 2006

Eryürek G., Project Supported by Higher Education Institutions, TeO2 Esaslı Optik Malzemelerin Sentezi ve Optik Termal ve Yapısal Özelliklerinin İncelenmesi, 2000 - 2004

Eryürek G., Project Supported by Higher Education Institutions, Bridgmen Yöntemi İle Nonlineer Kristallerin Teknolojisi, 1995 - 1996

Scientific Refereeing

Journal of Noncrystalline Solids, SCI Journal, July 2017

Journal of Alloys and Compounds, SCI Journal, June 2017

TUBITAK Project, April 2017

Spectrochimica Acta A: Molecular and Biomolecular Spectroscopy, SCI Journal, February 2017

Applied physics D, SCI Journal, January 2017

Journal of Luminescence, SCI Journal, April 2016

Citations

Total Citations (WOS):1101

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