

Gökhan Bilir

CURRICULUM VITAE&PUBLICATION LIST

Contact	İstanbul Technical University Department of Physics 34469 Maslak /Istanbul		bilirg@itu.edu.tr bilir@bc.edu +90 212 285 72 35
Personal	Nationality	: Turkish	
	Place of Birth	: Ankara / Turkey	
	Date of Birth	: May 9, 1980	
	Marital Status	: Married	
Education	Sep. 2007 – PhD., Physics Engineering, Istanbul Technical University Thesis Title : “Investigation of the Luminescence Processes and White Light Production From Nd3+ and Cr3+ Doped Metal Oxide Nano-Powders” Advisor: Prof. Dr. Gönül ÖZEN, Co-Advisor: Prof. Baldassare Di BARTOLO		
	2003 – 2006 M.Sc., Physics, Kafkas University Thesis Title: “Photoluminescence of N-Ions Implanted Gallium Selenide Layered Semiconductor Crystals” Advisor: Prof. Dr. Mevlüt KARABULUT		
	1999 – 2003 B.Sc., Physics, Kafkas University		
	1992 – 1998 High School, Artvin Anatolian High School		
Experience	October 2007 – present	Research&Teaching Assistant, Istanbul Technical University	
	December 2011 – July 2014	Visiting Scholar, Boston College, MA, USA	
	March 2004 – October 2007	Research&Teaching Assistant, Kafkas University	
Research Topics	<ul style="list-style-type: none">• Synthesis and Characterization of Nano-phosphor Materials• Synthesis of phosphor materials (nano-powders, glasses, single crystals) by using Wet Chemical Methods (Sol-Gel, Thermal Decomposition, Combustion Method) Melt Quenching, Bridgman Techniques• Structural characterization of phosphor materials (XRD, SEM, TEM)• Optical characterization of phosphor materials (UV-VIS-NIR Absorption Spectrometer, Laser Spectroscopy)• Investigation of the interactions and the energy transfer processes between optically active ions in crystalline and non-crystalline structures such as rare earth and transition metal ions• Production and Dynamics of White Light from Metal Oxide Nano-powders		
Instrumentation	<ul style="list-style-type: none">• Complete Photoluminescence Systems (monochromator, lasers, detectors, lock-in amplifier...)• Various UV-VIS-NIR Spectrophotometers		

- Crystallox Bridgman Single Crystal Growth System
- Digilab FTS7000 Raman Spectrometer
- Various high temperature furnaces

Languages Turkish (native)
English (fluent)
Italian (beginner)

Computer Skills MS Office
Origin
Mathematica
Intermediate level in MATLAB

	05/11/2012-06/21/2014 – Fellowship	Boston College, Department of Physics
Projects and Grants	12/11/2011-05/11/2012 – Fellowship	TÜBİTAK – 2214 Study Abroad Grant Program
	10/15/2007-10/15/2008 – Fellowship	TÜBİTAK – 1001 Research Project – 108M077 – Synthesis, thermal, optical and structural analysis of fluorotellurite glasses

Patents **Gökhan Bilir**, Baldassare Di Bartolo, “**Method and Device for Producing White Light from Y₂O₃ Nano-powders**” – Patent Pending 2014, USPTO Application# 14/298602, Published at 12/11/2014
<http://www.freepatentsonline.com/y2014/0362884.html>

Referee for Journals

1. Physica B: Condensed Matter
2. Journal of Materials Science
3. Solid State Communications
4. Chinese Optics Letters
5. Journal of Non-Crystalline Solids
6. Optics Communications

Publications

Articles (SCI Index)

1. M. Erdem, M. K. Ekmekci, H. Orucu and **G. Bilir**, “Structural and Spectroscopic Properties of δ -Y₂Si₂O₇ Nanopowders Activated with Nd³⁺ Ions” Int. J. Appl. Ceram. Tec., Accepted (August 2014)
2. **Gokhan Bilir**, Laser Phys. Lett., **12**(4) (2015) 045901.

3. **G. Bilir**, G. Ozen, B. Di Bartolo, *Opt. Mater.*, **42** (2015) 281-286.
4. **Gökhan Bilir**, Joseph Liguori, *J. Lumin.*, **153** (2014) 350-355.
5. **Gökhan Bilir**, Gönül Özen, Baldassare Di Bartolo, *Opt. Spectrosc.*, **118**(1) (2015) 114-117.
6. **G. Bilir**, G. Ozen, M. Bettinelli, F. Piccinelli, M. Cesaria, B. Di Bartolo, *IEEE Photonics Journal*, **6** (4) (2014) 2201211.
7. **G. Bilir**, G. Ozen, J. Collins, M. Cesaria, B. Di Bartolo, *IEEE Photonics Journal*, **6** (4) (2014) 8200518.
8. **Gökhan Bilir**, Baldassare Di Bartolo, *Opt. Mater.*, **36** (8) (2014) 1357-1360.
9. **G. Bilir**, G. Ozen, J. Collins, B. Di Bartolo, *Appl. Phys. A*, **115**(1) (2014) 263-273.
10. Hakan Kaygusuz, **Gökhan Bilir**, Filiz Tezcan, F. Bedia Erim, Gönül Özen, *Particuology*, **14** (2013) 19-23.
11. **Gokhan Bilir**, Gonul Ozen, John Collins, Baldassare Di Bartolo, *ECS Trans.*, **50**(41) (2013) 1-7.
12. **G. Bilir**, N. Mustafaoglu, G. Ozen, B. Di Bartolo, *Spectrochim. Acta A*, **83** (2011) 314-321.
13. **G. Bilir**, G. Ozen, *Physica B: Condensed Matter*, **406** (2011) 4007-4013.
14. **G. Bilir**, G. Ozen, D. Tatar, M.L. Öveçoğlu, *Opt. Commun.*, **284** (2011) 863-868.
15. M. Karabulut, **G. Bilir**, G.M. Mamedov, A. Seyhan, R. Turan, *J. Lumin.*, **128** (2008) 1551-1555.

Book Chapters

1. **Gokhan Bilir**, Gonul Ozen, John Collins, Maura Cesaria, Baldassare Di Bartolo, “Fluorescence-Based Studies of Nanoparticles” in *Nano-structures for Optics and Photonics*, edited by B. Di Bartolo, J. Collins, L. Silvestri, pp. 257-272 (2015).
2. Maura Cesaria, **Gokhan Bilir**, Gonul Ozen, M. Bettinelli, John Collins, Fabio Piccinelli, Baldassare Di Bartolo, “Incandescent Lamp-like White Light Emission from Doped and Undoped Oxide Nanopowders” in *Nano-structures for Optics and Photonics*, edited by B. Di Bartolo, J. Collins, L. Silvestri, pp. 273-284 (2015).

Conference Abstracts

1. **G. Bilir**, G. Ozen, J. Collins, B. Di Bartolo, “Emission of White Light from Doped and Undoped Oxide Nano-powders”, *ECS Fall Meeting 2014, Cancun, Mexico*.

2. **G. Bilir**, G. Ozen, B. Di Bartolo, “White Light Emission from Neodymium Doped and Undoped Ytria Nano-powders” International School of Atomic and Molecular Spectroscopy Nano-structures for Optics and Photonics, Workshop, Erice-Italy, 30 July – 5 August 2014 – Oral Presentation.
3. **G. Bilir**, G. Ozen, J. Collins, B. Di Bartolo, “Investigation of the Emission Properties and the Effect of Nd^{3+} Concentration in Nd^{3+} Doped Y_2O_3 Nano-powders” ICL’14 (International Conference on Luminescence), Wroclow, Poland, July 2014- Poster Presentation.
4. Joseph Liguori, **Gökhan Bilir**, “A New Source of White Light: Oxide Nano-powders Illuminated by a Laser Diode” NES APS Spring 2014 Meeting of the New England Section of the American Physical Society, Boston College, Chestnut Hill, MA, USA, April 2014 – Oral Presentation
5. Gaozan Ding, Xuesheng Chen, Baldassare Di Bartolo, **Gökhan Bilir**, “Optical Properties of Erbium or Neodymium Ions in Different Kinds of Host Materials-Ceramics versus Single Crystals” NES APS Spring 2014 Meeting of the New England Section of the American Physical Society, Boston College, Chestnut Hill, MA, USA, April 2014 – Poster Presentation
6. **Gokhan Bilir**, Gonul Ozen, John Collins, Baldassare Di Bartolo, “White Light Emission from Y_2O_3 Nano-powders Induced by Laser Diode Excitation” MRS Fall Meeting&Exhibition, Boston, MA, December 2013 – Poster Presentation.
7. **G. Bilir**, G. Ozen, J. Collins, B. Di Bartolo, “Fabrication and Spectral Invesitigation of $\text{Y}_2\text{O}_3\text{:Nd}^{3+}$ Nano-Particles” 224th ECS Meeting, San Francisco, California, USA, October 2013 – Poster Presentation
8. **Gökhan Bilir**, Marco Bettinelli, Fabio Piccinelli, John Collins, Maura Cesaria, Gonul Ozen and Baldassare Di Bartolo, “Spectroscopic Studies of Nanoparticles” International School of Atomic and Molecular Spectroscopy Nano-structures for Optics and Photonics, Summer School, Erice-Italy, 4-19 July 2013 – Oral Presentation
9. L. Wu, X. Chen, **G. Bilir**, B. Di Bartolo, “Investigation of Optical Ceramic Materials Nd: PLZT at different Nd Concentrations and Temperatures” APS Spring 2013 Meeting of the New England Section of the American Physical Society, Bridgewater-MA, USA, March 2013 – Poster Presentation
10. **G. Bilir**, G. Ozen, J. Collins, B. Di Bartolo, “Synthesis and Spectroscopy of Nanoscale $\text{Y}_2\text{O}_3\text{:Nd}^{3+}$ Phosphors” 222nd ECS Meeting, Honolulu, Hawaii, USA, October 2012 – Poster Presentation
11. **G. Bilir**, G. Ozen, J. Collins, B. Di Bartolo, “Spectroscopy of Y_2O_3 Nano-powders Doped with Neodymium” International School of Atomic and Molecular Spectroscopy Nano-structures for Optics and Photonics, Workshop, Erice-Italy, 3-9 July 2012 – Oral Presentation

12. **G. Bilir**, G. Ozen, "Optical and Structural Characterization of $\text{Y}_2\text{O}_3:\text{Nd}^{3+}$ Phosphors via Thermal Decomposition Method" NanoTR – VI, Çeşme, İzmir, Turkey, 2010 – Poster Presentation
13. **G. Bilir** and G. Ozen, "Luminescence Properties of Nanoscale $\text{Y}_2\text{O}_3:\text{Nd}^{3+}$ Phosphors," in Solid-State and Organic Lighting, OSA Technical Digest (CD) (Optical Society of America, 2010), paper JWA10
14. F. Tezcan, **G. Bilir**, H. Kaygusuz, B. Erim, G. Özen, "Size effect on the radiative transition rates of Tm^{3+} in Y_2O_3 nanocrystalline blue phosphors" Sixth International Conference on Inorganic Materials, Dresden, Germany, 2008
15. **G. Bilir**, D. Tatar, H. Çankaya, M.L. Öveçoglu, A. Sennaroglu, G. Ozen, "Radiative Transition Rates of Er^{3+} ions in $\text{TeO}_2 - \text{CdF}_2 - \text{WO}_3$ glasses" Sixth International Conference on Inorganic Materials, Dresden, Germany, 2008
16. **G. Bilir**, M. Karabulut, H. Mammadov, R. Turan, A. Seyhan, "Photoluminescence in N-ions Implanted GaSe Crystals" BPU-6 (6. International Conference of the Balkan Physical Union), Istanbul, Turkey, 2006.
17. H. Mammadov, M. Karabulut, **G. Bilir**, R. Turan, A. Seyhan "Azot İyonu Ekilmiş $\text{GaSe}<\text{N}>$ Kristallerinde Eksiton Fotoluminesansı" TFD 23rd International Conference, Muğla, Turkey, 2005

References

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