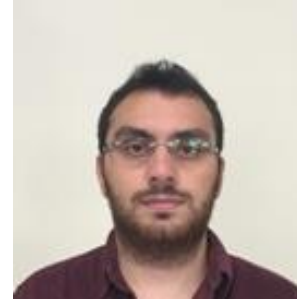


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**EDUCATION**

B.S. in Metallurgical and Materials Engineering, Dokuz Eylul University, GPA 3.23 2013  
M.S. in Metallurgical and Materials Engineering, Dokuz Eylul University, GPA 3.93 2016  
PhD in Metallurgical and Materials Engineering, Marmara University (2016-continued)

**TECHNICAL SKILLS****Material Synthesis & Characterization**

- Having depth knowledge on 0D, 1D, 2D & 3D micro and nano-structured materials (Sol-gel, Electrodeposition, PVD, Precipitation Methods)
- X-ray Diffraction (XRD)
- Scanning Electron Microscopy (SEM)
- Atomic Force Microscope (AFM)
- X-ray photoelectron spectroscopy (XPS)
- Thermal Gravimetric Analysis & Differential Thermal Analysis (TGA-DTA)
- Fourier Transform Infrared Spectroscopy (FTIR)
- Particle Size Analyser
- Contact Angle
- UV-Visible spectrophotometer
- Impedance (EIS)
- Furnaces

**HONORS AND AWARDS**

- (2013-2016) National Research Fellowship, TUBITAK
- (2013) The Best Poster Presentation Award, Dokuz Eylul University, Metallurgical and Material Engineering
- (2013) The Second Best Oral Presentation, Dokuz Eylul University, Metallurgical and Material Engineering

**RESEARCH HIGHLIGHTS**

- Thin Film (Sol-gel, Electrodeposition, Anodization, PVD)
- Photocatalytic degradation and hydrogen production
- Water splitting
- Corrosion behaviour of metals and alloys
- Nanostructured Semiconductor Metal Oxides

**RELEVANT COURSES**

Sol-gel, Nanotechnology, Nano-chemistry, Nano-electronic and Nano-computer, Material Characterization, Material laboratory, Electronic Ceramics, Electrochemical Technologies, Thermal Processing of Ceramics and Surface Modification of Materials

## **EXPERIENCE**

(2012) Dosan Heat Treatment Limited Liability Company. <http://dosanilislem.com/>

(2011) Elit Metallurgy-Investment Casting Industry Limited Liability Company. <http://www.elitmetalurji.com.tr/>

Researcher, “Development and production implant dosimeters in radiotherapy”, TUBITAK - 1003 Project, Turkey, 2013-2016.

## **RESEARCH EXPERIENCE**

- Undergraduate: “Production and Characterization of Light Emitting Paints For Airport Applications ( $\text{Sr}_4\text{Al}_{14}\text{O}_{25}:\text{Eu}^{2+}/\text{Dy}^{3+}$ )”
- Master: “Production of  $\text{Y}(\text{Ta},\text{Nb})\text{O}_4$  based implant dosimetry and its development and application in the radiotherapy”

## **INTERESTS AND ACTIVITIES**

Playing Chess, Playing musical instrument (Turkish Traditional musical instrument), Playing Football, Playing Pool, Playing Table tennis

## **PUBLICATIONS**

1-(\*) **S. Demirci**, S. Gültekin, S. A. Akalin, Ö. Öter, K. Ertekin and E. Çelik, “Synthesis and spectral characterization of  $\text{Sr}_4\text{Al}_{14}\text{O}_{25}:\text{Eu}^{2+}/\text{Dy}^{3+}$  blue–green phosphorous powders by sol–gel method”, Materials Science in Semiconductor Processing, Volume 31, (2015), pp 611–617.

2-(\*) **S. Demirci**, B. Öztürk, S. Yildirim, F. Bakal, M. Erol, O. Sancakoğlu, R. Yigit, E. Celik and T. Batar, “Synthesis and comparison of the photocatalytic activities of flame spray pyrolysis and sol–gel derived magnesium oxide nano-scale particles”, Materials Science in Semiconductor Processing, Volume 34, (2015), pp 154–161.

3-(\*) T. Dikici, **S. Demirci**, M. Toparli, “Effect of Electrolyte Concentration on the Surface Properties of Nanoporous  $\text{TiO}_2$  Layers Formed on Micro-roughened Titanium”, Manufacturing Science and Technology, Volume 3, (2015), pp 177-181.

4-(\*) I. Aydin, K. Ertekin, **S. Demirci**, S. Gultekin and E. Celik, “Sol-gel synthesized  $\text{Sr}_4\text{Al}_{14}\text{O}_{25}:\text{Eu}^{2+}/\text{Dy}^{3+}$  blue–green phosphorous as oxygen sensing materials”, Optical Materials, Volume 62, (2016), pp 285-296.

5-(\*) **S. Demirci**, T. Dikici, M. Yurddaskal, S. Gultekin, M. Toparli and E. Celik, “Synthesis and characterization of Ag doped  $\text{TiO}_2$  heterostructure films and their photocatalytic performances”, Applied Surface Science, Volume 390, (2016), pp 591-601.

6-(\*) T. Dikici, **S. Demirci**, M. Erol, “Enhanced photocatalytic activity of micro/nano textured  $\text{TiO}_2$  surfaces prepared by sandblasting/acid-etching/anodizing process”, Journal of Alloys and Compounds, Volume 694, (2017), pp 246-252.

7-(\*) S. Yildirim, **S. Demirci**, K. Ertekin, Erdal Celik, Z. A. Alicikus, “Production, characterization, and luminescent properties of  $\text{Eu}^{3+}$  doped yttrium niobate–tantalate films”,

Journal of Advanced Ceramics, Volume 6, (2017), pp 33–42.

8-(\*) E. Kilinc, **S. Demirci**, F. Uysal, E. Celik and H. Kurt, “High temperature thermopower of sol–gel processed  $Zn_{1-x-y}Al_xMe_yO$  (Me: Ga,In)”, Journal of Materials Science: Materials in Electronics, Volume 28, (2017), pp 11769–11778.

9-(\*) **S. Demirci**, C. Sarioglu, “Fast and low-cost fabrication of 1D hematite photoanode in pure water vapor and air atmosphere: Investigation the effect of the oxidation atmosphere on the PEC performance of the hematite photoanodes”, International Journal of Hydrogen Energy, Volume 42, (2017), pp 11139-11149.

10-(\*) T. Dikici, M. Yurddaskal, **S. Demirci**, E. Celik, “The effects of growth conditions on the surface properties and photocatalytic activities of anatase  $TiO_2$  films prepared via electrochemical anodizing and annealing methods”, Journal of Porous Materials, DOI 10.1007/s10934-017-0393-2

### CONFERENCE PAPERS, POSTERS, PRESENTATIONS

1- S. Yildirim, **S. Demirci**, Ö. Mermer, M. Toparli, L. Z. Alican Alicikus, F. Akman and E. Celik, “Production and Development of Monoclinic Yttrium Tantalate ( $M^{\wedge}YTaO_4$ ) X-Ray Phosphor via Sol-Gel Technique”, 2014 International Conference on Production Research – Africa, Europe and Middle East and 3<sup>rd</sup> International Conference on Quality and Innovation in Engineering and Management, Cluj-Napoca, Romania, 1-5 July 2014.

2- Ç. Ozer, **S. Demirci**, A. R. Sayin, M. Erol, O. Mermer and E. Celik, “Effect of various transition metals on the structural, optical and photocatalytic properties of  $TiO_2$  thin films” 10<sup>th</sup> Nanoscience and Nanotechnology Conference (NanoTR 10), Istanbul, Turkey, 17-21 June 2014.

3- T. Dikici, **S. Demirci** and M. Toparli, “Effect of electrolyte concentration on the surface properties of nanoporous  $TiO_2$  layers formed on micro-roughened titanium”, Advances in Materials & Processing Technology Conference (AMPT), Dubai, 17-20 November 2014.

4- S. Yildirim, **S. Demirci**, Ö. Mermer, M. Toparli, L. Z. Alican Alicikus, F. Akman and E. Celik, “Production and Development of Yttrium Tantalate Niobate ( $YT_{0.85}Nb_{0.15}O_4$ ) Thin Film X-ray Phosphor via Sol-Gel Technique”, Science and Application of thin films, Conference & Exhibition (SATF 2014), Çeşme, İzmir, Turkey, 15-19 September 2014.

5- B. Ozturk, **S. Demirci**, S. Yildirim, F. Bakal, M. Erol, O. Sancakoglu, R. Yigit, E. Celik and T. Batar, “Synthesis and Comparison of the Photocatalytic Activities of Sol-Gel and Flame Spray Pyrolysis Derived  $MgO$  Nanoparticles”, 3<sup>rd</sup> International Ceramic Glass Porcelain Enamel Glaze and Pigment Congress, Eskişehir, Turkey, 15-17 October 2014.

6- **S. Demirci**, S. Gultekin, S. A. Akalin, Ö. Oter, K. Ertekin and E. Celik, “Synthesis and Investigation of Spectral Characterization of  $Sr_4Al_{14}O_{25}: Eu^{2+}/Dy^{3+}$  Blue-Green Phosphorous Powders By Sol-Gel Method”, 3<sup>rd</sup> International Ceramic Glass Porcelain Enamel Glaze and Pigment Congress, Eskişehir, Turkey, 15-17 October 2014.

7- **S. Demirci**, S. Yildirim, Ö. Mermer, M. Toparli, L. Z. Alican Alicikus, F. Akman and E.

Celik,, “Production and Development of Yttrium Tantalate Niobate (YTa<sub>0.85</sub>Nb<sub>0.15</sub>O<sub>4</sub>) Thin Film X-Ray Phosphor via Sol-Gel Technique”, 3<sup>rd</sup> International Ceramic Glass Porcelain Enamel Glaze and Pigment Congress, Eskişehir, Turkey, 15-17 October 2014.

8- E. Kilinc, **S. Demirci**, F. Uysal, E. Celik and H. Kurt, “Fabrication of a Thermoelectric Module using p- and n-type Oxide Thermoelectric Materials”, 3<sup>rd</sup> International Symposium on Innovative Technologies in Engineering and Science, Valancia, Spain, June 2015.

9- **S. Demirci**, C. Sarioglu, “Investigation the effect of annealing atmosphere and time on photoelectrochemical (PEC) properties of  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> photoanode”, 2<sup>nd</sup> International Hydrogen Technologies Congress, Adana, Turkey, 15-18 March 2017.