

EZGİ BÜTEV ÖCAL (M.Sc)

Çankaya University,
Department of Materials Science and Engineering, Ankara, Turkey
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EDUCATION

- Ph.D. (2015-)** Middle East Technical University (METU) Ankara, Turkey
Department of Metallurgical and Materials Engineering
(3.93 / 4.00)
- M.Sc. (2012-2015)** Middle East Technical University (METU) Ankara, Turkey
Department of Metallurgical and Materials Engineering
(3.43 / 4.00)
“Production and Characterization of Surface Treated Biomedical Ti6Al7Nb Alloy Foams”. *Supervisor:* Prof. Dr. Şakir Bor, *Co-Supervisor:* Assoc. Prof. Dr. Ziya Esen.
- B.S. (2007-2012)** Middle East Technical University (METU) Ankara, Turkey
Department of Metallurgical and Materials Engineering
(2.66 / 4.00)
- High School (2002-2006)** Gazi Anatolian High School, Ankara, Turkey

WORK EXPERIENCE

- Lecturer**
(2013 March-on going) Çankaya University, Ankara, Turkey
Department of Materials Science and Engineering
- Project Assistant**
(2012 November - 2015 May) TUBİTAK 112M341 Project
Title: “Surface Activation of Porous Ti6Al7Nb Implant Alloys by Hydrothermal Methods for Biomedical Applications and Their Characterization”

RESEARCH AREAS

Heat treatment of titanium, Ti6Al4V and Ti6Al7Nb alloys, production of metallic porous materials and their mechanical behavior, surface activation of Ti and Ti alloys, metallic biomaterials, Ti-Mg composites

PUBLICATIONS

▪ JOURNAL ARTICLES (SCI)

- 1) Levent Koroglu, **Ezgi Butev**, Ziya Esen, Erhan Ayas. “A Novel Approach for Synthesis of Monticellite Based Bioactive Ceramic Powders from Boron Derivative Waste”. *Materials Letters*, 209, 315–318. (2017)
- 2) Ziya Esen, **Ezgi Bütev Öcal**. “Surface Characteristic and in-vitro behavior of hydrothermally treated bulk Ti6Al7Nb alloys”. *Surface and Coatings Technology*, 309, 829-839. (2017)
- 3) Ziya Esen, **Ezgi Bütev**, M.Serdar Karakaş. “A comparative study on biodegradation and mechanical properties of pressureless infiltrated Ti/Ti6Al4V-Mg composites”. *Journal of the Mechanical Behavior of Biomedical Materials*, 63, 273-286. (2016)
- 4) **Ezgi Bütev**, Ziya Esen, Şakir Bor. “Characterization of Ti6Al7Nb alloy foams surface treated in aqueous NaOH and CaCl₂ solutions”. *Journal of the Mechanical Behaviour of Biomedical Materials*, 60, 127-138. (2016)
- 5) **Ezgi Bütev**, Ziya Esen, Şakir Bor. “In vitro bioactivity investigation of alkali treated Ti6Al7Nb alloy foams. *Applied Surface Science*, 327, 437–443. (2015)

▪ CONFERENCE TALKS

- 1) **Ezgi Bütev**, Aydın Albayrak, Hande Bircan, Merve Nur Doğu, Pelin Gündoğmuş, Buse Kahyaoğlu, Ziya Esen. Structural and Functional Characterization of Surface Treated Biomedical Ti6Al7Nb Alloy Foams PPM 2015, International Porous & Powder Materials, 15-18 September 2015, Çeşme, İzmir, TURKEY.
- 2) **Ezgi Bütev**, Ziya Esen, Şakir Bor. In Vitro Studies of Surface Modified Highly Porous Ti6Al7Nb Alloys. TMS 2015 144th Annual Meeting & Exhibition, 15-19 March 2015, Orlando, FL, USA.
- 3) Ziya Esen, **Ezgi Bütev**, Emre Yılmaz. Production and Characterization of Magnesium based Composites. TMS 2015 144th Annual Meeting & Exhibition, 15-19 March 2015, Orlando, FL, USA.
- 4) **Ezgi Bütev**, Elif Eda Yeni, Emre Yılmaz, Ziya Esen, Şakir Bor. Characterization of apatite formation ability of alkali treated bulk Ti6Al7Nb alloy by in vitro studies”. IMMC 2014, 17th International Metallurgy and Materials Congress, 11-13 September 2014, Istanbul, TURKEY.
- 5) Elif Eda Yeni, **Ezgi Bütev**, Emre Yılmaz, Ziya Esen, Servet Turan, ‘‘Surface Treatment and Characterization of the Ti6Al4V Alloy Powders for Biomedical Applications. IMMC 2014, 17th International Metallurgy and Materials Congress, 11-13 September 2014, Istanbul, TURKEY.
- 6) **Ezgi Bütev**, Ziya Esen, Şakir Bor “Surface Activation of Ti6Al7Nb scaffolds”, THERMEC 2013, International Conference on Processing and Manufacturing of Advanced Materials, 02-06 December 2013, Las Vegas, Nevada, USA.

▪ POSTER PRESENTATIONS

- 1) Şeniz Kuşhan Akın, Ziya Esen and **Ezgi Bütev Öcal**. “Surface modification of titanium with silicon nitride”, 15th Conference and Exhibition of the European Ceramic Society (ECerS2017), July 9-13, 2017, Budapest, Hungary.
- 2) **Ezgi Bütev**, Elif Eda Yeni, Emre Yılmaz, Ziya Esen, Şakir Bor. Effect of alkali treatment parameters on surface structure and mechanical properties of porous Ti6Al7Nb scaffolds.

IMMC 2014 17th International Metallurgy and Materials Congress, 11-13 September 2014, Istanbul, TURKEY.

- 3) **Ezgi Büttev**, Ziya Esen. Manufacturing and Characterization of Titanium, Ti6Al4V and Ti6Al7Nb Alloy Dental Implants with highly Porous Surfaces”, 5th International Symposium of Advanced Protocols in Oral Implantology, April 2013, Antalya, TURKEY.

HONORS & AWARDS

- METU, Thesis Graduate Award, 2016. **Thesis Title:** “*Production and Characterization of Surface Treated Biomedical Ti6Al7Nb Alloy Foams*”
- 2016-2017 METU Graduate Courses Performance Award

ACADEMIC RESPONSIBILITIES

- Biomaterials Laboratory Coordinator, Çankaya University
- Metallography Laboratory Coordinator, Çankaya University
- Summer Internship Committee, Çankaya University
- Department Exam Coordinator, Çankaya University
- University-Industry Cooperation Commission, Çankaya University
- Department of Promotion and Social Affairs Commission, Çankaya University
- Alumni / Stakeholder Relations Commission, Çankaya University
- Data Collection and Evaluation Commission, Çankaya University
- Material Error and Notes Objection Commission, Çankaya University

PROFESSIONAL SKILLS

Language

- English (Advanced)

Instruments:

- Scanning Electron Microscope (SEM)
- Atomic Force Microscopy (AFM)
- Instron Mechanical Testing Machine
- MTS Mechanical Testing Machine
- X-ray Diffraction Analysis (XRD)

Computer Skills:

- Microsoft Office Programs
- OriginPro 8.5
- SigmaPlot

COURSES ASSISTED

Academic Year	Semester	Course Code	Course Name
2017-2018	Fall	MSE 407	Innovative Engineering Analysis and Design
		MSE 401	Design In Materials Engineering I
		MSE 307	Materials Characterization II
		MSE 225	Introduction to Materials Science
2016-2017	Spring	MSE 408	Innovative Engineering Design and Implementation
		MSE 206	Materials Characterization I
2016-2017	Fall	MSE 407	Innovative Engineering Analysis and Design
		MSE 401	Design In Materials Engineering I
		MSE 307	Materials Characterization II
		MSE 225	Introduction to Materials Science
2015-2016	Spring	MSE 408	Innovative Engineering Design and Implementation
		MSE 206	Materials Characterization I
2015-2016	Fall	MSE 407	Innovative Engineering Analysis and Design
		MSE 401	Design In Materials Engineering I
		MSE 307	Materials Characterization II
		MSE 225	Introduction to Materials Science
2014-2015	Spring	MSE 125	Materials Science and General Chemistry
		MSE 206	Materials Characterization I
2014-2015	Fall	MSE 307	Materials Characterization II
		MSE 225	Introduction to Materials Science
		CHEM 103	General Chemistry I
2013-2014	Summer	MSE 125	Materials Science and General Chemistry
2013-2014	Spring	MSE 125	Materials Science and General Chemistry
2013-2014	Fall	CHEM 103	General Chemistry I
		MSE 225	Introduction to Materials Science
2012-2013	Spring	PHYS 131	Physic I
		PHYS 132	Physic II