

# Faik N. Oktar

## Curriculum Vitae

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<http://bioe.eng.marmara.edu.tr/en/academic-staff/>

### Personal information

Place of birth Istanbul, Turkey

Nationality Turkish

Marital status Married

### Currently lectureship

Department of Bioengineering

Marmara University

Goztepe Campus, Engineering D Building,

34722 Kuyubasi-Istanbul, Turkey

### Co-affiliation

Advance Nanomaterials Research Laboratory

Department of Metallurgical and Materials Engineering

Marmara University

Goztepe Campus

Faculty of Technology

34722 Kuyubasi-Istanbul, Turkey

### Education

1991 – 1999 Biomedical Engineering, Doctor of Philosophy Bogazici University Istanbul, Turkey. (Prof. S. Altintas)

1987 – 1991 Biomedical Engineering, Master of Science, Bogazici University Istanbul, Turkey.

1977 – 1982 Dentistry, Bachelor, Marmara University Istanbul, Turkey.

### Research interests

Expert on plasma spraying process of bioceramics on titanium, Bioactivity studies of bioceramics, Studies about porous hydroxyapatite and bioceramic structures, Forming of hydroxyapatite and other bioceramic composites, Preparation of drug delivery systems and follow up, Cell Culture, Scaffolds for tissue engineering and applications, Nanomaterials, Nano-biomaterials, Archeology studies of ancient skeletons, PLD - Plasma Laser Deposition, MAPLE - Matrix Assisted Laser Deposition, Biomimetics, Electrospinning, Nano-biopolymers, Biopolymers, Hip implant manufacturing and applications for pets

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## Work & research & teaching position

- since 2015 **Senior Scientist**, *research and teaching, leading a research group* “Advance Nanomaterials Research Laboratory”, Faculty of Technology, Department of Metallurgical and Materials Engineering (Assoc. Prof. O. Gunduz), Marmara University, Istanbul, Turkey.  
Main research field: Biomaterials, Bioceramics, Nanomaterials, Nanotechnology
- Lectureship (non-tenured faculty)**, *teaching and research*, Department of Bioengineering, Faculty of Engineering, Marmara University, Istanbul, Turkey.
- Lectureship**, *teaching*, Department of Medical Imaging Technics, School of Health Related Professions, Marmara University, Istanbul, Turkey.
- since 2013 **Lectureship**, *teaching*, Department of Physiotherapy and Rehabilitation, School of Health Sciences, AREL University, Istanbul, Turkey.
- 2010-2017 **Lectureship**, *teaching*, Department of Industrial Design, Faculty of Engineering and Architecture, AREL University, Istanbul, Turkey.
- 2014-2015 **Lectureship**, *teaching*, Department of Physiotherapy and Rehabilitation, School of Health Sciences, Istanbul Bilgi University, Istanbul, Turkey.
- 2014-2015 **Lectureship**, *teaching*, Department of Interior Architecture, Faculty of Engineering and Architecture, AREL University, Istanbul, Turkey.
- 2007-2015 **Senior Scientist**, *founding member, researching*, Nanotechnology and Biomaterials Application and Research Center, Marmara University, Istanbul, Turkey.
- 2011-2014 **Lectureship**, *teaching*, Department of Electronic Engineering, Faculty of Engineering and Architecture, AREL University, Istanbul, Turkey.
- 2011-2013 **Associate Professor**, Department of Bioengineering, Faculty of Engineering, Marmara University, Istanbul, Turkey.
- 2008-2013 **Associate Professor**, Department of Medical Imaging Technics, School of Health Related Professions, Marmara University, Istanbul, Turkey.
- June 2012 – Sep 2002 **Short-term visitor**, *research*, Orthopaedic Biomechanics Center, Department of Mechanical Engineering, University of Bath, Bath, UK.
- Mar 2009 – Oct 2009 **Fellowship**, Department of Mechanical Engineering, Mechanical Technology and Automation Centre, University of Aveiro, Aveiro, Portugal.  
Main fellowship field: Nanotechnology Research Division
- 2007-2008 **Associate Professor**, Department of Industrial Engineering, Faculty of Engineering, Marmara University, Istanbul, Turkey.
- 2003-2007 **Assistant Professor**, Department of Industrial Engineering, Faculty of Engineering, Marmara University, Istanbul, Turkey.
- 2005-2005 **Postdoctoral assistant**, *research*, **Department of Ceramic**, School of Engineering, University of Aveiro, Aveiro, Portugal.
- 2002-2003 **Lectureship**, *teaching*, X-ray Technology Program, Marmara University, Istanbul, Turkey.
- 2001-2003 **Research Scientist**, *researching*, New Technologies Research & Development Center, Marmara University, Istanbul, Turkey.
- 2001-2003 **Lectureship**, *teaching*, M. Sc. Program, Biomedical Engineering, Istanbul University, Istanbul, Turkey.
- 1999-2002 **Lectureship**, *teaching*, Biomedical Equipment Technology Program, Istanbul University, Istanbul, Turkey.
- 2000-2001 **Program Coordinator**, Biomedical Program, Marmara University, Istanbul, Turkey.
- 1992-1999 **Research Assistant**, Dentist at Dental Clinic, Biomedical Engineering Institute, Bogazici University (Bosphorus University), Istanbul, Turkey.
- 1991-1992 **Product Manager, Turkey Section**, Owen Mumford Ltd. and Hypoguard Ltd., UK

- 1988-1991 **Dentist**, Private Office, Istanbul, Turkey
- 1987-1988 **Product Manager, Turkey Section**, Organon Ltd, Netherlands
- 1984-1987 **Dentist**, Private Office, Istanbul, Turkey
- 1983-1984 **Dentist**, Reserve Office, Turkish Navy, Istanbul, Turkey
- 1982-1983 **Dental Technician**, Orthodontic Treatment Center, Madison Heights, Detroit, Michigan, USA

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## Awards

- 2008-2009 **First Prize**, *Compromisso com a Ciência Program, Portuguese Science and Technology Foundation*, Portugal.

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## Taught courses

- W 2016 - **Introduction to Biomedical Engineering and Bioinstrumentation**, main course, part of graduate program.
- W/S 2016 - **Graduation Project Program**, elective course, part of graduate program.
- W/S 2016 - **Ultrasonography Applications**, main course, part of graduate program.
- W/S 2016 - **Angiography Applications**, main course, part of graduate program.
- W/S 2016 - **Fluoroscopy Applications**, main course, part of graduate program.
- W 2015 - **Biomechanics**, elective course, part of graduate program.
- W/S 2014/15 **Food & Ecology**, elective course, part of graduate program.
- W 2014 - **Biomaterials**, elective course, part of graduate program.
- W 2013 - **Biomedical Instrumentation and Measurements**, elective course, part of graduate program (M.Sc. level)
- W 2013 - **Ergonomy and Design**, main course, part of graduate program.
- W 2014/15 **Materials Science for EEN**, elective course, part of graduate program.
- W 2014/15 **Materials Science**, elective course, part of graduate program.
- S 2012/14 **Prototyping Manufacturing Methods**, elective course, part of graduate program.
- S 2012/14 **Biological Materials**, elective course, part of graduate program (M.Sc. level).
- S 2012/13 **Basic Mechanical Structures II**, elective course, part of graduate program.
- W 2012/13 **Basic Mechanical Structures I**, elective course, part of graduate program.
- S 2012 - **Product Indicator and Controls**, elective course, part of graduate program.

- S 2012 - **Biosafety**, elective course, part of graduate program (M.Sc. level).
- S 2012 - **Research Methods and Technics**, main course, part of graduate program.
- S 2012- **Medical Ethics**, main course, part of graduate program.
- W 2012 - **Biomaterials Science and Engineering**, main course, part of graduate program (M.Sc. level).
- W 2012 - **Nanomaterials and Applications**, elective course, part of graduate program (PhD level).
- W 2012 - **Introduction to Bioengineering**, main course, part of graduate program.
- W 2012 - **Communication II**, main course, part of graduate program.
- W 2012 - **Communication I**, main course, part of graduate program.
- W 2011/14 **Medical Terminology**, main course, part of graduate program.
- W 2011/15 **Clinical Applications II**, main course, part of graduate program.
- S 2011/14 **Materials Science for Electronics and Electric Engineers**, main course, part of graduate program.
- S 2011/13 **Principles of Material Design I**, elective course, part of graduate program.
- S 2011 - **Special Topics from Ergonomics**, elective course, part of graduate program.
- W 2010/15 **Clinical Applications I**, main course, part of graduate program.
- W 2010/13 **Principles of Material Design 2**, main course, part of graduate program.
- W 2010 - **Anthropometrics**, main course, part of graduate program.
- W 2005/08 **Special Topics in Industrial Engineering I (Various Biomaterial Topics)**, main course, part of graduate program.
- W 2005/08 **Ergonomics**, main course, part of graduate program.
- S 2005/08 **Biomaterials Economy II**, main course, part of graduate program (M.Sc. and PhD level).
- S 2005/08 **System Analysis and Design**, main course, part of graduate program.
- W 2005/08 **Biomaterials Economy I**, main course, part of graduate program (M.Sc. and PhD level).
- W 2004/08 **System Analysis and Design I**, main course, part of graduate program.
- S 2003/08 **Industrial Engineering Fundamentals**, main course, part of graduate program.
- S 2003/04 **Industrial Engineering Fundamentals**, main course, part of graduate program.
- W 2003/04 **Introduction to Industrial Engineering**, main course, part of graduate program.

- S 2003      **Medical Imaging Systems**, main course, part of graduate program.
- S 2003      **Biochemistry and Instrumental Analysis, main course**, part of graduate program.
- W 2002/08    **Ergonomics**, elective course, part of graduate program (M.Sc. and PhD level).
- W 2002/03    **Hospital Clinical Engineering Systems**, elective course, part of graduate program (M.Sc. level).
- W 2002/03    **Hospital Management**, elective course, part of graduate program (M.Sc. level).
- S 2002/08    **Physiology**, main course, part of graduate program.
- S 2002/08    **Human Factors in Engineering Systems**, elective course, part of graduate program.
- S 2002/03    **Physical Therapy Equipment**, main course, part of graduate program.
- W 2002/03    **Biologic Hazards**, main course, part of graduate program.
- S 2001/02    **Graduation Project**, main course, part of graduate program.
- S 2001/02    **Anatomy and Physiology**, main course, part of graduate program.
- S 2001/02    **Biomedical Laboratory Equipment**, main course, part of graduate program.
- S 2001/02    **Medical Imaging Technology**, main course, part of graduate program.
- W 2001/02    **Medical Equipment Technology**, main course, part of graduate program.
- W 2001/02    **Introduction to Biomedical Equipment Technology**, main course, part of graduate program.
- W 2001/02    **Hospital Organization**, main course, part of graduate program.
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## Mentoring

### Mentoring undergraduate students to M.Sc.

Genc Y, "Use of factorial design of experiments in the development of zirconia toughened hydroxyapatite composites", 2003.

Çal, Baris, "The influence of bond-coating on plasma sprayed alumina-titania, doped with biologically derived hydroxyapatite, on stainless steel", \*Guided with Prof. S.Salman from Marmara University, 2006.

Kıyıcı I.A., "Characterization of hydroxyapatite-glass composites plasma spraying coatings", 2011. \*Guided with Prof. S.Salman from Marmara University, 2011.

Aktekin A., "Characterization of zeolite-chitosan scar tissue healing membranes". \*Guided with Prof. E. Öner from Marmara University, 2012.

Kel D., "Characterization of nano-bioceramic production from natural sources (Sea urchine, land snail, egg shell) ", \*Guided with Asst. Prof. Dilek Bilgic from Marmara University, 2011.

Karagoz M, " Electrical characterization of from bovine none derived hydroxyapatite", Yildiz Technical University, \*Guided with Assoc. Prof. S. Daglilar, 2016.

### Mentoring undergraduate students to PhD.

Kalkandelen C. " Synthesis of Alumino Oxide-Based Bioceramic Materials", Istanbul University \*Guided with Prof. A. Akan, 2017.

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## Service

### Editorial positions

- 20../ Editorial board, Journal of Biomaterials and Nanobiotechnology.
  - 20../ Editorial board, New Journal of Glass and Ceramics
  - Editorial board, The Scientific World Journal – Chemical Engineering
  - Editorial board, Trends in Materials Sciences
  - Editorial board, Scientia Research Library
  - Editorial board, International Journal of Nanomedicine And Nanotechnology
  - Editorial board, International Journal of Nanomaterials, Nanotechnology and Nanomedicine
  - Editorial board, Nanomaterials for Medical Applications: Benefits and Risks
  - Editorial board, Bioceramics Development and Applications (Omics International)
- (<https://www.omicsonline.org/editorialboard-bioceramics-development-applications-open-access.php>)

### Referee for journals

- Biomaterials (Elsevier)
- Materials Research Bulletin
- Journal of American Ceramic Society
- Journal of Hazardous Materials
- BioMedical Engineering Online
- Journal of Biomedical Materials Research: Part A
- Biomaterilica
- Journal Processing and Application of Ceramics

Journal of Biomaterials and Nanobiotechnology  
New Journal of Glass and Ceramics  
Advanced Science Letters (American Scientific Publishers)  
Key Engineering Materials  
Journal of the European Ceramic Society  
European Polymer Journal  
Applied Clay Sciences  
Journal of Nanomaterials  
The Scientific World Journal  
Acta Biomaterialia (Elsevier)  
Journal of Composite Materials (SAGE)  
Advanced Materials Research  
Bulletin of Chemical Reaction Engineering & Catalysis  
Journal of Thermoplastic Composite Materials (SAGE)  
Applied Surface Science (Elsevier)  
Journal of Materials Science: Materials in Medicine  
Materials Science and Engineering C (Elsevier)  
Trends in Materials Sciences (TMS)  
Journal of Tissue Engineering (SAGE)  
BioResources Online Journal  
Clinical Oral Implants Research  
Sigma Journal of Engineering and Natural Sciences  
ACS Nano  
ACS Applied Materials & Interfaces  
The Scientific Bulletin" edited by University POLITEHNICA of Bucharest  
Journal of the Mechanical Behavior of Biomedical Materials (Elsevier)  
Arabian Journal of Chemistry (Elsevier)  
Powder Technology (Elsevier)  
Materials and Design (Elsevier)  
Journal of Bioengineering & Biomedical Science, OMICS Publishing Group-BIOBIO  
International Journal of Pharmaceutics (Elsevier)  
Journal of Applied Biomaterials and Functional Materials (Wichtig)  
Sigma Journal of Engineering and Natural Sciences  
Surface and Coatings Technology (Elsevier)  
Journal of Ceramic Science and Technology [Göller Verlag GmbH - Deutsche Keramische Gesellschaft (DKG)]  
Journal of Alloys and Compounds (Elsevier)  
International Journal of Polymer Science (Hindawi)  
International Journal of Nanomaterials, Nanotechnology and Nanomedicine (Peertechz Publications)  
Nanoscale Research Letters (Springer)  
Revista Universitas Scientiarum (Universitas Scientiarum)

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## Funding

- 2012-2015 **Project Partner**, The Scientific and Technological Research, The National Authority for Scientific Council of Turkey (TÜBİTAK) Research of Romania JOINT BILATERAL RESEARCH, Development of Nanostructured Functional Biosurfaces by Laser Direct Writing Technologies.
- 2010-2011 **Project Coordinator**, The Scientific and Technological Research, The National Authority for Scientific Council of Turkey (TÜBİTAK) Research of Romania JOINT BILATERAL RESEARCH, A new generation of nanostructured coatings for biomedical implants applications.
- 2009-2011 **Project Partner**, National Research Institute for Boron of Turkey, Production of electromagnetic textile by electrospinning method.

2008-2009 **Project Coordinator**, Istanbul Municipality Project in the frame work Project Istanbul, Genuine silicone functional hinge joint orthosis.

2006-2008 **Project Coordinator**, Turkish State Project, Electroconductive Bioactive Bioceramics.

2004-2005 **Project Partner**, MISAG- 281, Production of Chitosan from Crustean Shells.

2001-2006 **Project Coordinator**, Marmara University Foundation, Antibiotic delivery systems with dynamic compression method.

1997-1999 **Project Partner**, Marmara University Foundation, Production of Surface Active Ceramics as Drug Carrying Systems.

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## Former industrial relationships

1. Glass-Fiber Inc. which belongs to Sisecam Group of Companies (Sisecam is the world 4th biggest glass manufacturer company)
2. Senkron Ceramic Coating Ltd.
3. Kabotek Ceramic Coating Ltd.
4. Prokap Ceramic Coating Ltd.
5. Devotrans Scientific Instrument Manufacturing Inc.
6. Serbay Orthopedic Systems Manufacturing Ltd.
7. Cybernorth Corporate: Robotic applications for biomedical applications
8. PROMEDART: Aesthetic applications, custom made implants.

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## Memberships

Member of Chamber of Dentists of Istanbul since 1987.  
Member of University of Bosphorus Alumni Club (BUMED) since 1999.  
Member of Graduates of Austrian School (Sankt George) (since 2001)  
Member of International Society for Bioceramics in Medicine (ISCM) (since 2002).  
Member of European Biomaterials Society (since 2006).



- 1- Popescu AC, Florian PE, Stan GE, Popescu-Pelin G, Zgura I, Enculescu M, **Oktar FN**, Trusca R, Sima LE, Roseanu A, Duta L, Physical-chemical characterization and biological assessment of simple and lithium-doped biological-derived hydroxyapatite thin films for a new generation of metallic implants, *Applied Surface Science*. pp. 1-12, in press 2018. <https://doi.org/10.1016/j.jfoodeng.2017.11.013>
- 2- Sahin YM, Su S, Ozbek B, Yucel S, Pinar O, Kazan D, **Oktar FN**, Ekren N, Gunduz O, Production and characterization of electrospun fish sarcoplasmic protein based nanofibers, *Journal of Food Engineering*, Vol. 222, pp. 54-62, 2018
- 3- Unal S, Ekren N, Sengil AZ, **Oktar FN**, Irmak S, Oral O, Sahin YM, Kilic O, Agathopoulos S, Gunduz O, Synthesis, characterization, and biological properties of composites of hydroxyapatite and hexagonal boron nitride, *Journal of Biomedical Materials Research Part B: Applied Biomaterials*, Vol. 008, pp. 1-9, 2017. DOI 10.1002/jbm.b.34046.
- 4- Burak O, Barkın E, Nazmi E, **Oktar FN**, Akyol S, Ben-Nissan B, Turkoglu SH, Kalkandelen C, Mergen A, SERAP KD, OZEN G, Oguzhan G, Production of the novel fibrous structure of poly ( $\epsilon$  caprolactone) /tri-calcium phosphate/hexagonal boron nitride composites for bone tissue engineering, *Journal of the Australian Ceramic Society*, pp.1-10, 2017 <https://doi.org/10.1007/s41779-017-0149-0>
- 5- Karacan I, Gunduz O, Ozyegin LS, Gökce H, Ben-Nissan B, Akyol S, **Oktar FN**, The natural nanobioceramic powder production from organ pipe red coral (*Tubipora musica*) by a simple chemical conversion method, *Journal of the Australian Ceramic Society*, pp.1-13, 2017. <https://doi.org/10.1007/s41779-017-0156-1>
- 6- Aydogdu MO, Oprea AE, Trusca R, Surdu AV, Ficai A, Holban AM, Iordache F, Padurarau AV, Filip DG, Altun E, Ekren N, **Oktar FN**, Gunduz O, Production and Characterization of Antimicrobial Electrospun Nanofibers Containing Polyurethane, Zirconium Oxide and Zeolite, *BioNanoScience*, Vol. 5., pp. 1-12. 2017, DOI 10.1007/s12668-017-0443-x.
- 7- Yetmez M, Erkmen ZE, Kalkandelen C, Ficai A, **Oktar FN**, "Sintering effects of mullite-doping on mechanical properties of bovine hydroxyapatite", *Materials Science and Engineering C*, Vol. 77, pp.470-475, 2017.
- 8- Kalkandelen C, M. Suleymanoglu M, Kuruca SE, A. Akan A, **Oktar FN**, Gunduz O, "Part 2: biocompatibility evaluation of hydroxyapatite-based clinoptilolite and  $Al_2O_3$  composites", *Journal of Australian Ceramic Society*, Vol. 53, pp.1-7, 2017. DOI 10.1007/s41779-017-0027-9.
- 9- Kalkandelen C, Gunduz O, Akan A, **Oktar FN**, "Part 1: Clinoptilolite-alumina-hydroxyapatite composites for biomedical engineering", *Journal of Australian Ceramic Society*, Vol. 53, pp.91-99, 2017.
- 10- Duta L, Mihailescu N, Popescu AC, Luculescu CR, Mihailescu IN, Çetin G, Gunduz O, **Oktar FN**, Popa AC, Kuncser A, Besleaga C, Stan GE, "Comparative physical, chemical and biological assessment of simple and titanium-doped ovine dentine-derived hydroxyapatite coatings fabricated by pulsed laser deposition", *Applied Surface Science*, Vol. 413, pp. 129–139 (2017).
- 11- Ficai D, Ficai A, Ecaterina A, Yetmez M, Agrali OB, Elemek E, Gunduz O, Sahin YM, **Oktar FN**, "Drug Delivery Systems for Dental Applications", *Current Organic Chemistry*, Vol. 21, pp. 6473, 2017. DOI: 10.2174/1385272820666160511104145
- 12- Komur B, Bayrak F, Ekren N, Eroglu MS 5, **Oktar FN**, Sinirlioglu ZA, Yucel S, Guler O, Gunduz O, "Starch/PCL composite nanofibers by co-axial electrospinning technique for biomedical applications", *BioMed Eng OnLine*, Vol. 16:40, pp. 1-13, (2017) 16:40. DOI 10.1186/s12938-017-0334-y
- 13- Bozkurt Y., Sahin A., Sunulu A., Aydogdu MO, Altun E, **Oktar FN**, Ekren N, Gunduz O, "Electrospun Nanocomposite Materials, A Novel Synergy of Polyurethane and Bovine Derived Hydroxyapatite", Conference: International Conference on Applied Nanotechnology and Nanoscience (ANNIC) 2016 (ANNIC 2016), Book Series: Journal of Physics Conference Series, Vol. 829. ISSN: 1742-6588, DOI 10.1088/1742-6596/829/1/012015, 2017.
- 14- Inan AT, Komurcu B, Gokce H, Ficai A, Salman S, Ekren N, **Oktar FN**, Gunduz O, "Physical Characterization of Turbot (*Psetta maxima*) Originated Natural Hydroxyapatite", *Acta Physica Polonica A*, Vol. 131, pp. 397-399, 2017. DOI: 10.12693/APhysPolA.131.397
- 15- Komurcu B, Altun E, Aydogdu MO, Bilgic D, H. Gokce, Ekren N, Salman S, Inan AT, **Oktar FN**, Gunduz O, "Hydroxyapatite Synthesis from Fish Bones: Atlantic Salmon (*Salmo salar*)", *Acta Physica Polonica A*, Vol. 131, pp. 400-402, 2017. DOI: 10.12693/APhysPolA.131.400.
- 16- Komurcu B, Ozturk ER, Inan AT, Gunduz O, Andronescu E, Ficai A, Ekren N, **Oktar FN**, "Characterization of Cu/Ag/ Eu/ Hydroxyapatites Composites by Using Wet Chemical Precipitation", *Acta Physica Polonica A*, Vol. 131, pp. 392-395, 2017. DOI: 10.12693/APhysPolA.131.392

- 17- Andronescu E, Brown J, **Oktar F**, Agathopoulos S, Chou J, Obata A, "Nanomaterials for Medical Applications: Benefits and Risks", *Journal of Nanomaterials*, Special Issue 2016. DOI: 10.1155/2016/8284319.
- 18- Komur B, Lohse T, Can HM, Khalilova G, Geçimli ZN, Aydoğdu MO, Kalkandelen C, E. Stan, Sahin YM, Sengil AZ, Suleymanoglu M, Kuruca SE, **Oktar FN**, Salman S, Ekren N, Fikai A, Gunduz O, "Fabrication of naturel pumice/ hydroxyapatite composite for biomedical engineering", *BioMed Eng OnLine*, Vol. 15, No.81, pp. 1-20, 2016. DOI 10.1186/s12938-016-0203-0.
- 19- Olena S, Gunduz O, Pinchuk N, Stan GE, **Oktar FN**, "Tissue Engineering Scaffolds from La<sub>2</sub>O<sub>3</sub> – Hydroxyapatite Boron Glass Composites", *Journal of The Australian Ceramic Society*, Vol. 52, No. 2, pp. 103 - 110, 2016.
- 20- Mihailescu N, Stan GE, Duta L, Chifiriuc MC, Bleotu C, Sopronyi M, Luculescu C, **Oktar FN**, Mihailescu IN, "Structural, compositional, mechanical characterization and biological assessment of bovine-derived hydroxyapatite coatings reinforced with MgF<sub>2</sub> or MgO for implants functionalization", *Materials Science and Engineering C*, Vol. 59, pp. 863-874, 2016.
- 21- **Oktar FN**, Gokce H, Gunduz O, Sahin YM, Agaogullari D, Turner IG, Ozyegin LS, Ben-Nissan B, "Bioceramic Production from Giant Purple Barnacle (*Megabalanus tintinnabulum*)", *Key Engineering Materials*, Vol. 631, pp. 137-142, 2015.
- 22- Macha IJ, Boonyang U, Cazalbou S, Ben-Nissan B, Charvillat C, **Oktar FN**, Grossin D, "Comparative study of Coral Conversion, Part 2: Microstructural evolution of calcium phosphate", *Journal of The Australian Ceramic Society*, Vol. 51, Issue 2, pp.149-159, 2015.
- 23- Yilmaz S, Agathopoulos S, **Oktar FN**, "Crystallization of leucite in potassium-alumino-silicate glasses", *Journal of Optoelectronics and Advanced Materials* Vol. 17, No.5-6, pp.681-685, 2015.
- 24- Şahin Y, Gündüz O, Bulut B, Özyeğin L, Gökçe H , Ağaogulları D, Chou J, Kayalı E, Ben-Nissan B, **Oktar F**, "Nano-Bioceramic Synthesis from Tropical Sea Snail Shells (Tiger Cowrie - *Cypraea tigris*) with Simple Chemical Treatment", *Acta Physica Polonica A*, Vol. 127, Issue 4, pp. 1055-1058, 2015.
- 25- **Oktar FN**, Yetmez M, Fikai D, Fikai A, Dumitru F, "Molecular Mechanism and Targets of the Antimicrobial Activity of Metal Nanoparticles", *Curr Top Med Chem.*,15(16): pp.1583-1588, 2015.
- 26- Macha IJ, Ozyegin LS, **Oktar FN**, Ben-Nissan B, "Conversion of Ostrich Eggshells (*Struthio camelus*) to Calcium Phosphates", *Journal of The Australian Ceramic Society*, Vol. 51, Issue. 1, pp. 125-133, 2015.
- 27- Sahin YM, Yetmez M, **Oktar FN**, Gunduz O, Agathopoulos S, Andronescu E, Fikai D, Sonmez M, Fikai A., "Nanostructured Biomaterials with Antimicrobial Properties", *Current Medicinal Chemistry*, Vol. 21, Issue 29, pp. 3391-3404, 2014.
- 28- Gunduz O, Gode C, Ahmad Z, Gökçe H, Yetmez M, Kalkandelen C, Sahin YM, **Oktar FN**, "Preparation and Evaluation of Cerium Oxide-Bovine Hydroxyapatite Composites for Biomedical Engineering Applications", *Journal Mechanical Behaviour Biomedical Mateiels*, Vol. 35, pp. 70-76, 2014.
- 29- Oprea O, Andronescu E, Fikai D, Fikai A, **Oktar FN**, Yetmez M, "ZnO Applications and Challenges", *Current Organic Chemistry*, Vol. 18, pp. 192-203, 2014.
- 30- Gunduz O, Sahin YM, Agathopoulos S, Ben-Nissan B, **Oktar FN**, "A New Method for Fabrication of Nanohydroxyapatite and TCP from the Sea Snail *Cerithium vulgatum*", *Journal of Nanomaterials*, Vol. 2014, pp. 1-6, 2014.
- 31- Demirkol D, Oral AY, **Oktar FN**, Kayali ES, "Effects of Commercial Inert Glass (CIG) Addition on Mechanical and Microstructural Properties of Chicken Hydroxyapatite (CHA)", *Key Engineering Materials*, Vol. 587, pp. 33-38 2014.
- 32- Demirkol N, **Oktar FN**, Kayali ES, "Production and Mechanical Properties of Commercial Synthetic Hydroxyapatite (CSHA) Composites, *Key Engineering Materials*, Vol. 587, pp. 147-153, 2014.
- 33- Gunduz O, Sahin YM, Agathopoulos S, Ağaogulları D, Gökçe H, Kayali ES, Aktas C, Ben-Nissan B, **Oktar FN**, "Nano Calcium Phosphate Powder Production through Chemical Agitation from Atlantic Deer Cowrie Shells (*Cypraea cervus Linnaeus*)", *Key Engineering Materials*, Vol. 587, pp. 80-85, 2014.
- 34- Duta L, Serban N, **Oktar FN**, Mihailescu IN, "Biological hydroxyapatite thin films synthesized by pulsed laser deposition", *Optoelectronics and Advanced Materials – Rapid Communications* 7 (11-12), pp. 1040–1044, November - December 2013.
- 35- Macha IJ, Ozyegin LS, Chou J, Samur R, **Oktar FN**, Ben-Nissan B, "An Alternative Synthesis Method for Di Calcium Phosphate (Monetite) Powders from Mediterranean Mussel (*Mytilus galloprovincialis*) Shells", *Journal of The Australian Ceramic Society*, Vol. 49, pp. 122-128, 2013.
- 36- **Oktar FN**, Agathopoulos S, Ozyegin LS, Turner IG, Gunduz O, Demirkol N, Brück S, Ben-Nissan B, Samur R, Kayali ES, Aktas C, "Nano-Bioceramic Production via Mechano-Chemical Conversion (Ultrasonication)", *Key Engineering Materials*, Vol. 529-530, pp. 609-614, 2013.
- 37- Demirkol N, **Oktar FN**, Kayali ES, "Influence of Niobium Oxide on the Mechanical Properties of Hydroxyapatite", *Key Engineering Materials*, Vol. 529-530, pp. 29-33, 2013.
- 38- Tamasan ML, Ozyegin LS, **Oktar FN**, Simon V, "Characterization of calcium phosphate powders

- originating from *Phyllacanthus imperialis* and Trochidae Infundibulum concavus marine shells", *Materials Science and Engineering C*, Vol. 33, pp.2569-2577, 2013.
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- 15- Ozbek B, Kilic O, Gunduz O, Ekren N, Gokce H, **Oktar FN**, "Mechanical and Physical Properties of Dentine-Glass Composites", *Key Engineering Materials*, Vol. 720, pp 257-263, 2016.
- 16- Keler MK, Gunduz O, Daglilar S, Ekren N, **Oktar FN**, "Die mechanischen Eigenschaften von Hydroxyapatite (HAp) Polycaprolactone (PCL) Biocomposite", *Journal of Functional Materials, Biomechanics, and Tissue Engineering* (Publisher DE GRUYTER), Vol. 16, Issue 2/3, pp.231, 2015.
- 17- **Oktar FN**, Gokce H, Gunduz O, Sahin YM, Agaogullari D, Turner IG, Ozyegin LS, Ben-Nissan B, "Bioceramic Production from Giant Purple Barnacle (*Megabalanus tintinnabulum*)", *Key Engineering Materials*, Vol. 631, pp. 137-142, 2015.
- 18- Gunduz O, **Oktar FN**, "Preparation of Scaffolds and New Biomaterials for Health Care Industries", *Bioceramic Development and Applications*, Vol. 4, pp.1-3, 2014.
- 19- Celik HH, Gunduz O, Ekren N, Ahmad Z, **Oktar FN**, "Predicting the Mechanical Properties of BHA-Li<sub>2</sub>O Composites Using Artificial Neural Networks", *Journal of Biomaterials and Nanobiotechnology*, Vol.

2, pp. 97-100, 2011.

**20- Oktar FN**, Turoglu HT, Silahci BH. "Bone Scintigraphy: A valuable tool for determination of osseointegration", *Romanian Journal of Biochemistry*, Vol. 47, Issue 1, pp. 37-45, 2010.

**21-** Carvalho AL, Faria PEP, Grisi MFM, Souza SLS, Taba Jr M., Palioto D.B., Novaes Jr AB, Fraga AF, Ozyegin, LS, **Oktar FN**, Salata LA, "Effects of Granule Size on the Osteoconductivity of Bovine and Synthetic Hydroxyapatite: A Histologic and Histometric Study in Dogs", *Journal of Oral Implantology*, Vol. 33, pp. 267-276, 2007.

**22-** Daglilar S, Erkan ME, Gunduz O, Ozyegin LS, Salman S, Agathopoulos S, **Oktar FN**, "Mechanical Properties of Bioceramic Reinforced Bone Cement", *J. Aust. Ceram. Soc*, Vol. 42, pp. 6-9, 2006.

**23-** Heybeli N, **Oktar FN**, Ozyazgan, S Akkan, G., Ozsoy, S., "Low-cost antibiotic Loaded Systems for Developing Countries", *Technology and Health Care*, Vol. 11, pp. 207-216, 2003.

## Book Chapters

**1-** The influence of bond-coating on plasma sprayed alumina-titania, doped with biologically derived hydroxyapatite, on stainless steel. Author(s): Salman S, Cal B, Gunduz O, et al. Conference Information: 3rd International Conference on Advanced Research in Virtual and Rapid Prototyping, SEP 24-29, 2007 Leiria, PORTUGAL Source: VIRTUAL AND RAPID MANUFACTURING - ADVANCED RESEARCH IN VIRTUAL AND RAPID PROTOTYPING Book Series: Proceedings and Monographs in Engineering, Water and Earth Sciences Pages: 289-294 Published: 2008.

**2-** Effect of Sintering Temperature on Mechanical Properties and Microstructure of Sheep-bone Derived Hydroxyapatite (SHA). Author(s): Karacayli, U.; Gunduz, O.; Salman, S.; et al. Conference: 13th International Conference on Biomedical Engineering (ICBME) Location: Singapore, SINGAPORE Date: DEC 03-06, 2008. Sponsor(s): AMTI; BES Technol; ESLSYS; VICON; INSTRON; Process Eng Publishing; Wiley Blackwell, 13TH INTERNATIONAL CONFERENCE ON BIOMEDICAL ENGINEERING, VOLS 1-3 Book Series: IFMBE Proceedings Volume: 23 Issue: 1-3 Pages: 1271-1274 Published: 2009.

**3-** Influence of Boroxide Bioactive Bioglasses (BBB) on osteoblast viability. Author(s): Valerio P, Goes AM, Karacayli U, et al. Conference Information: 1st International Conference on Biodental Engineering, JUN 26-27, 2009 Oporto, PORTUGAL. Source: BIODENTAL ENGINEERING Pages: 99 103 Published: 2010

**4-** Effect of sintering temperature on mechanical properties and microstructure of zeolite (clinoptilolite) reinforced bovine hydroxyapatite (BHA) composites. Author(s): Karacayli U, Gunduz O, Salman S, et al. Conference Information: 1st International Conference on Biodental Engineering, JUN 26-27, 2009 Oporto, PORTUGAL. Source: BIODENTAL ENGINEERING Pages: 105-108 Published: 2010

**5-** Nanobiomaterials in Dentistry: Applications of Nanobiomaterials, editor: Alexandru Mihai Grumezescu, Volume 11, Chapter 8, Nanotechnology in dentistry, Fikai A, Fikai D, Andronescu E, Yetmez M, Ozkalayci N, Agrali OB, Sahin YM, Gunduz O, **Oktar FN**, Elsevier 2016, pp.187-210, <http://dx.doi.org/10.1016/B978-0-323-42867-5.00008-4>

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## Invited talks and seminars

"The necessity of biomedical staff", TIPTEK 2000, Congress of technological progress in medicine and its clinical practice, 22-24 September 2000, Izmir, Turkey.

"New Natural Materials", biommedd 2008, 13-16 November 2008, Bucurest, Romania.

"HA Bioceramics", University of Federal University of Minas Gerais, Belo Horizonte, Brazil, October 2006.

"New Natural Materials", Ioannina University, Ioanina, Greece April 2007.

"New Natural Materials", International Cyprus University, Lefkosa, Northern Turkish Cyprus Republic, March 2008.

"New Natural Materials", Mc Gill University, Montreal, Canada, May 2008.

"New Natural Materials", Sydney University, Sydney, Australia, May 2008 (Lecture Theatre 4,



Westmead Hospital Education and Conference Centre 8:30-9:30)

"New Natural Materials", Birmingham University, School of Metallurgy and Materials, Birmingham, UK, July 2012.

"New natural hydroxyapatites – nano-hydroxyapatites and their composites", INM – Leibniz Institute for New Materials, Saarbrücken, Germany, 18 April 2012.

"New Natural Materials. What Mother Nature teach us", Montan Universitaet, Department Kunststofftechnik – Kunststoffverarbeitung, Leoben, Austria, 27 October 2014.

"Novel Bioceramic Production from Natural Sources", Izmir, Turkey, 15-18 September 2015.

## Total Publications, Citations and h index

