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Biography

Dr. Aybala USTA YILDIRIM graduated from Sakarya University in 2011 with a Bachelor's degree in Metallurgical and Materials Engineering. She received her Master degree in 2014 in Mechanical Engineering at Wichita State University in Kansas, USA. At the same university, she pursued her PhD and graduated in 2018 with a major in Mechanical Engineering specializing in Materials Science Engineering and minoring in Industrial Engineering with Statistical Methods and Design of Experiment. During her Master's and PhD, she worked as research assistant and teaching assistant lecturing numerous courses in the Mechanical Engineering Department. After coming back to Turkey, she worked as Research and Development Engineer in a private corporation in Ankara for 2 years. She currently works at Marmara University as Assistant Professor at Mechanical Engineering Department.

Education Information

Doctorate, Wichita State University, Faculty of Engineering, Mechanical Engineering, United States Of America 2015 - 2018

Postgraduate, Wichita State University, Faculty of Engineering, Mechanical Engineering, United States Of America 2013 - 2014

Undergraduate, Sakarya University, Faculty Of Engineering, Department Of Metallurgical And Materials Engineering, Turkey 2009 - 2011

Foreign Languages

English, C2 Mastery

Research Areas

Engineering and Technology

Published journal articles indexed by SCI, SSCI, and AHCI

- I. Investigating MTX-Loaded magnetic nanocomposite particles for treatment of rheumatoid arthritis**
Usta A., Man K. P., Strong N., Misak H., Wooley P. H., Asmatulu R.

Journal of Magnetism and Magnetic Materials, vol.499, 2020 (SCI-Expanded)

- II. **Deicing and self-cleaning of plasma-treated superhydrophobic coatings on the surface of aluminum alloy sheets**

Subeshan B., Usta A., Asmatulu R.

Surfaces and Interfaces, vol.18, 2020 (SCI-Expanded)

- III. **Polyurethane nanocomposite coating with silanized graphene and hexagonal boron nitride as nanoadditives for improved resistance against ultraviolet degradation**

Tran T. V., Abedin F., Usta A., Asmatulu R.

Journal of Composite Materials, vol.53, no.10, pp.1387-1399, 2019 (SCI-Expanded)

Articles Published in Other Journals

- I. **STUDYING THE ELECTROCHEMICAL BEHAVIORS OF ANODIZED METALLIC IMPLANTS FOR IMPROVED CORROSION RESISTANCE**

MURAD M. S., USTA A., ASMATULU R., CEYLAN M.

İstanbul Ticaret Üniversitesi Fen Bilimleri Dergisi, vol.21, no.41, pp.117-135, 2022 (Peer-Reviewed Journal)

- II. **Synthesis and evaluation of electrospun PCL-plasmid DNA nanofibers for post cancer treatments**

Ceylan M., Asmatulu R., Jiang J., USTA A., Jia T., Yao L., Yang S.

Materials Today: Proceedings, vol.71, pp.58-63, 2022 (Scopus)

Refereed Congress / Symposium Publications in Proceedings

- I. **Investigating effects of graphene nanoinclusions for improved desalination rates of salt water under solar heat**

Patil V., Usta A., Rahman M. M., Asmatulu R.

ASME 2018 International Mechanical Engineering Congress and Exposition, IMECE 2018, Pennsylvania, United States Of America, 9 - 15 November 2018, vol.12

- II. **Synthesis, stability and selection study of oil-in-water nanoemulsions containing nigella sativa L. essential oil**

Usta A., Rahman M., Asmatulu R.

ASME 2017 International Mechanical Engineering Congress and Exposition, IMECE 2017, Florida, United States Of America, 3 - 09 November 2017, vol.14

- III. **Encapsulation of natural ingredient for skin protection via nanoemulsion process**

Asmatulu E., Usta A., Alzahrani N., Patil V., Vanderwall A.

Nanosensors, Biosensors, Info-Tech Sensors and 3D Systems 2017, Oregon, United States Of America, 26 - 29 March 2017, vol.10167

- IV. **Functionalized hexagonal boron nitride nanocoatings for protection of transparent plastics**

Van Tran T., Usta A., Asmatulu R.

Active and Passive Smart Structures and Integrated Systems 2016, Nevada, United States Of America, 21 - 24 March 2016, vol.9799

- V. **Synthesis and analysis of electrically sensitive hydrogels for advanced drug delivery systems**

Usta A., Asmatulu R.

ASME 2015 International Mechanical Engineering Congress and Exposition, IMECE 2015, Texas, United States Of America, 13 - 19 November 2015, vol.3-2015

- VI. **Preparation and characterization of drug-loaded thermosensitive hydrogels**

Saeednia L., Usta A., Asmatulu R.

ASME 2013 International Mechanical Engineering Congress and Exposition, IMECE 2013, San Diego, CA, United States Of America, 15 - 21 November 2013, vol.3 B

Metrics

Publication: 11

Citation (Scopus): 49

H-Index (Scopus): 4