

Title: Biological Perspective to Material Science

Abstract

Biopolymers have a wide use in bioengineering due to their antimicrobial, antioxidant and non-toxic properties. In this seminar, production of three dimensional biopolymers from different organisms together with their characterization and application areas will be presented. Biopolymers to be mentioned in the presentation are chitin, chitosan, cellulose and biosilica. The application areas of the produced 3D materials are i) drug loading and releasing properties, ii) food coating to increase the shelf life, iii) bio-cup production for healthy weight loss, iv) biological mesh samples to be used in surgical operations, v) production of multifunctional porous bioactive micro silica beads from a sponge for biomedical applications. In a general summary, the studies carried out by BIPEMAS research group in recent years and the projects that are planned for future will be mentioned.

Short biography

Professor Dr. Murat Kaya received his BSc degree from Karadeniz Technical University in 2003. He completed his Master's Degree (2005) and Ph.D. (2008) at Ankara University, Institute of Science, Department of Biology. He worked at Gent University (Belgium) for 8 months under the Erasmus Program in 2006. He studied at BARRALAB for 8 months in London Imperial College (UK) under the Lifelong Learning Program in 2008. He worked as a visiting scientist at AMEMIYA LAB at University of California Merced for 10 months under TÜBİTAK 2219 program in 2017-2018. He was awarded as a young scientist of the year (2018) in Turkey by "Bilim Kahramanları Derneği". Dr. Kaya is currently working as a faculty member at Aksaray University, Faculty of Arts and Sciences, Department of Biotechnology and Molecular Biology.

