Journal of Nanosciences: Current Research
ISSN 2572-0813
2020
Vol.05 No.3

Advances in Biomemisis of Nano Materials and it's application

Madhavi Swamy*

Cummins college of Engineering For Women, Pune

Abstract

Biomimesis is the science that incorporates or mimics the model; structure and working of nature.The working mechanisms of natural elements such as efficiency, durability, adaptability and self-healing capability have always intrigued designers and engineers. This scientific integration has been useful in solving complex real life problems mainly self-repairing abilities, multifunctional coatings, environmental exposure tolerance and resistance, energy crisis, etc. By studying this art of life we can enhance the working of our existing mechanical modules. For instance, maple seeds use aerodynamic principles to disperse themselves into the wind over long distances, they rotate while falling off and eventually this spin stabilises the descent even under the influence of strong wind velocities. The centre of gravity of the wing shaped seed is determined by the positioning of the heavy nut located at the base, which helps in maintaining a lift even with slow velocity. This technique has been used in developing helicopter blades, gliders, aircrafts and drones. Despite the technological advancements in the field of science, engineers and scientists are having difficulty in solving complex engineering and survival problems. Innovating with Bio inspired solutions will help us not only to solve such problems but also to address the concerns of climate change. This paper reviews the existing technologies used in biologically synthesizing the nanomaterials and their highly efficient properties. A thorough report on various categories of biomimetics will also be studied.

Biography:

Madhavi Swamy is currently pursuing her Bachelor's degree from Cummins College of Engineering for Women, Pune in the field of Mechanical Engineering. She also received a Research Fellowship at Teesside University, Middlesbrough, UK. Wherein she worked in a DASA, UK sponsored project under the title "Expanded Metal Foam – Strength improvements through sintering". She is also working on her sponsored Final Year project under Kirloskar Oil and Engines, Ltd, titled "Estimation of Pressure drop across exhaust system by cfd simulation".

Akash Joshi completed his Bachelor's degree from Vishwakarma Institiute of Information Technology. He is currently employed at a startup org 'Gigindia' as a Fullstack developer. He has publishes two paper under his name titled "Global MBA and Cross-Cultural Issues" and "Comparative study of NLP based IR system".

Speaker Publications:

1. "An Overview of the Applications of Nanomaterials and Nanodevices in the Food Industry. / 2020.

32nd Nano Congress for Future Advancements; Frankfurt, Germany- June 12-13, 2020.

Abstract Citation:

Madhavi Swamy, Advances in Biomemisis of Nano Materials and it's application, Nano Congress 2020, 32nd Nano Congress for Future Advancements; Webinar- June 12-13, 2020; Frankfurt, Germany- June 12-13, 2020. 2020 (https://nanocongress.nanotechconferences.org/abstract/2020/advances-in-biomemisis-of-nano-materials-and-it-s-application)