Bridging Theory to Practice: Biomimetic Nanoscience and Nanotechnology to Design for Society

Ille C. Gebeshuber

Institute of Microengineering and Nanoelectronics, Universiti Kebangsaan Malaysia, 43600 UKM Bangi, Malaysia & Institute of Applied Physics, Vienna University of Technology, Wiedner Hauptstrasse 8-10/134, 1040 Wien, Austria, Europe

gebeshuber@iap.tuwien.ac.at, +60 13 319 8588

Biomimetic nanoscience and nanotechnology are important emerging fields that increasingly influence our daily lives. In functioning ecosystems (as opposed to our current human society) there is no rich and no poor. Resources are locally available for all, and are harvested and processed in benign ways that result in products that, when at the end of their lifespan, may serve as food or fertiliser for the others. Biomimetic inspiration that transfers the established integrative approach of living Nature regarding structure, functionality and beauty to artefacts (technology and products) promises great advancement for design to positively support well-being for the underprivileged.