Nano-micro particle and nano-micro particle composites interaction with biological material

Dr. rer. nat. **Martina BAUM**

Institute for Materials Science, Christian-Albrechts Universität zu Kiel,
Kaiserstr. 2, D-24143, Kiel, Germany
e-mail: marb@tf.uni-kiel.de

There are manifold applications in which it is essential to modify and to understand the detailed interactions at the interface between abiotic and biotic material. The facets of these applications can reach from anti-adhesive surfaces, to the interaction of micro- and macro-organisms in the wide field of antifouling and fouling-release surfaces, to name only a few. One way to find novel ideas for material modifications is the detailed investigation of the interaction between proteins, micro- and macro-organisms with varying surface and bulk material properties. We use this approach to develop an environmentally friendly antifouling coating for maritime structures by modifying a full-solid polymer matrix with nano-micro ZnO particles. This talk is going to give detailed insight into this topic and an overview on further ongoing research at the interface between biotic and abiotic materials.