

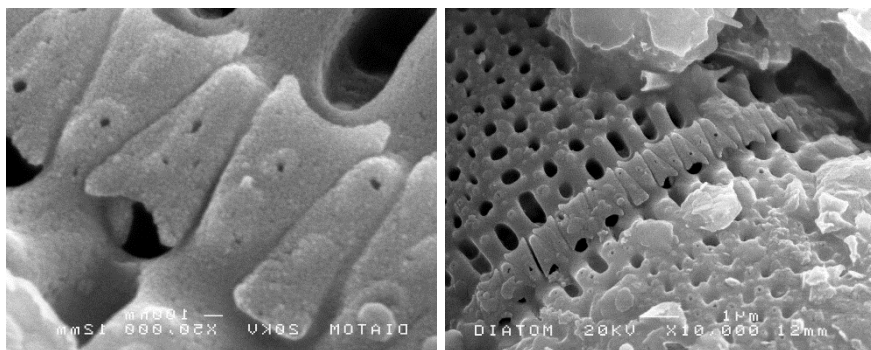
Die Institute für Physikalische Chemie und für
Anorganische Chemie - funktionelle Materialien
laden im Rahmen des
Seminars für Physikalische Chemie und Materialchemie
ein zu einem Gastvortrag von

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"Green Nanotribology - Challenges, Development and Opportunities"

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Währinger Str. 42, 1090 Wien**

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Tribology is the science of friction, adhesion, lubrication and wear. In nanotribology, the functional units of the related materials, structures and processes are on the nanoscale. The seminar talk analyses current nanotribology regarding its potential to go green, and presents promises and possible pitfalls of such an

approach. The basic aspects of green nanotribology, nanosurfaces, nanoagents and nanoprocesses are analysed in light of three questions: How can processes get more environmentally sustainable with nanotribology? How to prevent processes to turn worse because of adverse chemical reactions? And, how to prevent that the resulting green nanotribology is not only upfront 'green' and negative impact on the environment and organisms and ecosystems is only transferred to other layers? Biological best-practice green nanotribological systems, structures, and processes are identified and serve as an inspiration to address the above questions and establish a path towards green nanotribology, sustainable, efficient, and innovative.

Figure: Zipper-like biomineralized silica structures with optimised tribological properties in a diatom (single celled alga). Scale bars: 100 nm and 1000 nm. © Centre for Microscopy and Microanalysis, University of Queensland, Australia, reproduction with permission.