

Symposium Bioinspired Materials (SYBM)

jointly organized by
 Section Metal and Materials Physics (MM),
 Section Biological Physics (BP),
 Section Chemical and Polymer Physics (CPP),
 Section Thin Layers (DS), and
 Section Dynamics and Statistical Physics (DY)

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Nature provides a wide source of inspiration for chemists, physicists and engineers to create highly sophisticated functional materials. Many natural materials with complex, often hierarchical structure provide an unequalled level of adaptivity, multifunctionality, and mechanical performance. Biomimetic materials research provides a unique opportunity for physicists in a rapidly expanding field between the worlds of biology, physics and materials science. It starts by elucidating the physical origins of the outstanding functionality of biological materials, and aims at designing improved or even radically new materials based on the knowledge of natural systems. Bioinspired materials will have an impact on various fields, from engineering to functional materials, as well as regenerative medicine.

Overview of Invited Talks and Sessions

(lecture room H1)

Invited Talks

SYBM 1.1	Thu	9:30–10:00	H1	Using Ice to Mimic Nacre: From Structural Materials to Artificial Bone — ●A. P. TOMSIA, S. DEVILLE, E. SAIZ
SYBM 1.2	Thu	10:00–10:30	H1	On the structure of biogenic CaCO_3 — ●B. POKROY
SYBM 1.3	Thu	10:30–11:00	H1	Bio-Inspired Hybrid Materials from Block Copolymer Assemblies and Nanoparticle Co-assemblies — ●U. WIESNER
SYBM 1.4	Thu	11:15–11:45	H1	Bio-Inspired Organic-inorganic Hybrid Materials — ●U. STEINER
SYBM 1.5	Thu	11:45–12:15	H1	Structural, Nanomechanical, and Nanotribological Characterization of Human Hair Using Atomic Force Microscopy and Nanoindentation — ●BHARAT BHUSHAN

Sessions

SYBM 1.1–1.5	Thu	9:30–12:15	H1	Symposium Bioinspired Materials
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Continuation with contributed talks in FV MM, session MM35, lecture hall H16 on Thursday 14:45–19:00. Poster session from 19:00 in front of lecture hall H16.