

# Biomimetic Fibre Composites

# Workshop

Organized by

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Biological Materials - Biomimetics  
University of Applied Sciences Bremen



Bremen

Teerhof, University of Bremen

30.08.2011 - 31.08.2011

## Programme

## Day 1

- 10:30 Opening
- 11:15 **Welcome - Aims and Scope of the Biomimetic Fibre Composite Workshop**  
Jörg Müssig (University of Applied Sciences, Bremen, Germany)
- 11:30 **Round of introduction**
- 11:45 **Botany and Biomimetic Fibre Composites**  
Tobias Haushahn (Plant Biomechanics Group, Freiburg, Germany)
- 12:15 **Dislocations in plant fibres and their implication for technical composites**  
Mark Hughes (Helsinki University of Technology,
- 12:45 **Cellulose Fibres with Defects and Biocomposites with Porosity**  
Hans Lilholt & Bo Madsen (Risø DTU, Roskilde, Denmark)
- 13:15 **Lunch Break**
- 14:15 **Biomimetic Fibre Composites at the Working Group Biological Materials**  
Jörg Müssig & Nina Graupner (University of Applied Sciences, Bremen, Germany)
- 14:45 **Development and Processing of Fibre Reinforced Composite Structures**  
Sonja Niemeyer (Institute of Polymer Materials and Plastics Engineering, TU Clausthal, Germany)
- 15:15 **Biomimetic Fibre Composite Research at University of Leuven**  
Ignaas Verpoest (University of Leuven, Leuven, Belgium)
- 15:45 **Coffee Break**
- 16:15 **Are hierarchical Nanocomposites the next step forward in Making Green Composites with improved properties?**  
Koon Yang Lee & Alexander Bismarck (Imperial College London, UK)
- 16:45 **Functionalization of Fibres Using Plasma Technology**  
Dirk Hegemann (EMPA, St. Gallen, Switzerland)
- 17:15 **Discussion**
- 17:30 **End**

## Programme

## Day 2

- 09:00 **Flight Membrane - An Example for Multifunctionality**  
Thomas Stegmaier (ITV Denkendorf, Germany)
- 09:30 **Combining Complex Lightweight Structures with fibre composites: Solutions in Nature and Potentials for the Technical World**  
Christian Hamm (Alfred Wegener Institute for Polar and Marine Research, Germany)
- 10:00 **Processing and Application of Biomorphous Ceramics**  
Dietmar Koch (DLR Stuttgart, Germany)
- 10:30 **Bioinspired Self-healing Polymers**  
Anke Nellesen (Fraunhofer UMSICHT, Oberhausen, Germany)
- 11:00 **Biobased and Bioinspired Materials and Material Identity**  
Mikael Lindström (Innventia, Stockholm, Sweden)
- 11:30 **Coffee Break**
- 11:45 **Final Discussion and Future Activities**
- 13:30 **Lunch**
- 14:30 **End**