



## First Announcement

Natural materials such as bone, cartilage, silk or plant tissues have evolved an intricate multi-scale structure that confers them exceptional mechanical and other physical properties. It is their internal architecture which allows an adaptation to various biological needs. Similarly, architected biomaterials are gaining increasing importance in biomedical applications. While their complex structure allows for a better optimization for often conflicting needs, such as mechanical stability, resorption and biointegration, this poses challenges for synthesis, characterization and modeling. The symposium aims at discussing these issues, as well as the potential for architected biomaterials in regeneration medicine and in tissue engineering.

The trilateral symposium **Architected biomaterials, Medical and Tissue Engineering** is organized by the Science & Technology Department of the French Embassy in Berlin, in collaboration with partners from three countries within the scope of the Weimar Triangle:

- the Max Planck Institute of Colloids and Interfaces in Potsdam (Germany),
- the University of Grenoble (France),
- and the Warsaw University of Technology (Poland).

It aims at stimulating discussion and at enhancing the exchange of recent scientific knowledge. Experts from academia, research institutes as well as industry are expected to participate.

We kindly invite all experts to register before the **5<sup>th</sup> of November 2014**. Please send an email with your complete coordinates (first name, name, institution, email, telephone) to [gregory.arzatian@diplomatie.gouv.fr](mailto:gregory.arzatian@diplomatie.gouv.fr) or register on line <http://www.wissenschaft-frankreich.de/de/formular/>. An acknowledgement will be sent to you. Registration is obligatory but free of charge. The number of places is limited. Participants attending the symposium have a possibility to submit a poster, presenting the research activities in their host institution (team, department,..). Selection of posters will be done by the scientific coordinators.

### For more information please contact:

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# Preliminary program

## 4<sup>th</sup> - 5<sup>th</sup> December 2014

**Welcome address from the French Embassy**

**Introduction** (person to be confirmed)

**Scientific introduction:** Peter Fratzl (Max Planck Institute of Colloids and Interfaces in Potsdam - DE)

### **Session 1: Architected Ceramic Biomaterials**

Chair: Wojciech Swieszkowski (Warsaw University of Technology - PL)

Speakers: Jérôme Chevalier (INSA Lyon - FR); Aldo Boccaccini (University Erlangen - DE); Witold Lojkowski (Institute of High Pressure Physics, Polish Academy of Sciences, Warsaw - PL)

### **Session 2: Multiscale Polymeric Biomaterials**

Chair: Denis Favier (University of Grenoble - FR)

Speakers: Carsten Werner (IPF Dresden - DE); Mirosława El Fray (West Pomeranian University of Technology, Szczecin - PL); Benjamin Nottelet (University of Montpellier 1 - FR)

### **Session 3: Materials for Stem Cell Manipulation or Regeneration**

Chair: Peter Fratzl (Max Planck Institute of Colloids and Interfaces in Potsdam - DE)

Speakers: Małgorzata Lewandowska-Szumiel (Warsaw Medical University - PL); Didier Letourneur (University Paris 13 - FR); James Kirkpatrick (University of Mainz - DE)

### **Session 4: Architected Surfaces**

Chair: Wojciech Swieszkowski (Warsaw University of Technology - PL)

Speakers: Thomas Boudou (Grenoble INP- FR); Aranzazu Del Campo (Max Planck Institute for Polymer Research, Mainz - DE); Tomasz Ciach (Warsaw University of Technology - PL)

### **Session 5: Metallic Biomaterials**

Chair: Denis Favier (University of Grenoble - FR)

Speakers: Frank Witte (Charité Medical University Berlin - DE); Jan Dutkiewicz (Institute of Metallurgy and Materials Science, Polish Academy of Sciences, Cracow - PL); Thierry Gloriant (INSA Rennes - FR)

### **Session 6: Systems Approaches**

Chair: Peter Fratzl (Max Planck Institute of Colloids and Interfaces in Potsdam - DE)

Speakers: Krzysztof Kurzydłowski (National Centre for Research and Development, Warsaw - PL); Donald Martin (University of Grenoble - FR); Thomas Lenarz (Medical University Hannover - DE)

### **Session 7: Round table discussion on the perspectives of architected biomaterials**

Chair: Yves Brechet (CEA - French Alternative Energies and Atomic Energy Commission - FR)

Participants to be confirmed

The symposium language is English