



# ESF Research Conferences

A Programme of the European Science Foundation

## Biological Surfaces and Interfaces

EuroConference on

### Biomaterials, Biosensors & Analytical Techniques

Supported by the European Commission, Research DG, Human Potential Programme,  
High-Level Scientific Conferences (Contract No: HPCF-CT-2002-00212)

Sant Feliu de Guixols, Spain, 18 – 23 June 2005

Chair: **Bengt Kasemo** (Chalmers University of Technology, Gothenburg, S)

Vice-Chair: **Marcus Textor** (ETH Zurich, CH)

*With support from Generalitat de Catalunya*



[www.gencat.net](http://www.gencat.net)

## Final Programme

On line at: <http://www.esf.org/conferences/pc05187>

### Saturday 18 June

---

18.00	Registration at the hotel reception and ESF desk
19.00	Dinner
20.30	Welcome Drink

### Sunday 19 June

---

#### **Session 1: Biomimetic Surfaces and Assemblies**

08.45	Conference Opening
09.00-09.40	<b>Virgil Percec</b> (University of Pennsylvania, US) <i>Porous Protein Mimics</i>
09.40-09.55	Discussion
09.55-10.35	<b>Alain Brisson</b> (Université Bordeaux 1, F) <i>Construction and applications of bio-surfaces with multi-functional 2D protein matrices</i>
10.35-10.50	Discussion
10.50-11.20	Coffee break

11.20-12.00	<b>Janos Vörös</b> (ETH Zurich, CH) <i>In situ, dynamic control of biointerfaces at the micro/nanoscale</i>
12.00-12.15	Discussion
12.15-12.55	<b>Abraham Shanzer</b> (Weizmann Institute of Science, IL) <i>Fluorescent Iron Chemosensors with Surface-Adhesive Functionalities</i>
12.55-13.15	Discussion
13.15	Lunch

### **Session 2: Biomolecules and Polymers at Biointerfaces**

16.00-16.40	<b>Flemming Besenbacher</b> (University of Aarhus, DK) <i>SPM studies of biomolecules at surfaces</i>
16.40-16.55	Discussion
16.55-17.20	Coffee break
17.20-18.00	<b>Andrew G. Thomas</b> (Univ. of Manchester, UK) <i>Titanium dioxide; from mimicking nature to bactericide</i>
18.00-18.15	Discussion
18.15-18.55	<b>Viola Vogel</b> (ETH Zurich, CH) <i>How water molecules regulate the mechanical stability of adhesion proteins and their complexes with integrins</i>
18.55	Discussion
19.15	Dinner
20.30	<b>Dave Grainger</b> (Colorado State Univ., US) <i>Microarrays of DNA and proteins: smaller spots, big expectations</i>
Followed by	Poster Session I and Drinks

## **Monday 20 June**

---

### **Session 3: NanoBio & Expt Techniques and Biointerface Sensing**

09.00-09.40	<b>Vinod Subramaniam</b> (Univ. of Twente, NL) <i>Visualizing protein aggregation using hybrid optical and scanning probe microspectroscopies</i>
09.40-09.55	Discussion
09.55-10.35	<b>Fredrik Höök</b> (Lund University, Lund, S) <i>Localized surface plasmon resonance sensing of lipid-membrane mediated biomolecular reactions</i>
10.35-10.50	Discussion
10.50-11.20	Coffee break

- 11.20-12.00 **Tomoji Kawai** (Osaka University, J)  
*Nano-structured Biosensors toward Single Molecular Detection*
- 12.00-12.15 Discussion
- 12.15-12.55 **Mischa Bonn** (Leiden University, NL)  
*Non-linear vibrational spectroscopy of model membranes*
- 12.55-13.15 Discussion
- 13.15 Lunch

**Session 3: continued**

- 16.00-16.40 **Melissa Hines** (Cornell University, US)  
*The unexpected role of surface chemistry in nanomechanics*
- 16.40-16.55 Discussion
- 16.55-17.20 Coffee break
- 17.20-19.00 Poster Session I
- 19.00 Dinner
- 20.30 **Amélie Eriksson Karlström** (Royal Institute of Technology, S)  
*The Human Proteom and related biochips*
- followed by Poster Session II and Drinks

**Tuesday 21 June**

---

**Session 4: Biofunctional Surfaces: Cells & Bacteria at Surfaces**

- 09.00-09.40 **Joachim Spatz** (Max-Planck-Institute, D)  
*Nano-Patterned Surface as Ruler for Molecular Length Scales and Cell Functional Template in Cell Adhesion*
- 09.40-09.55 Discussion
- 09.55-10.35 **Julie Gold** (Chalmers Univ. of Tech., S)  
*Functionalized supported phospholipid bilayers: Experience in cell culture*
- 10.35-10.50 Discussion
- 10.50-11.20 Coffee break
- 11.20-12.00 **Giovanni Marletta** (University of Catania, I)  
*Cell and Bacteria Adhesion on Patterned Surfaces*
- 12.00-12.15 Discussion
- 12.15-12.55 **Stephen Badylak** (McGowan Inst. for Regenerative Medicine, US)  
*Surface characteristics of biological scaffolds derived from extracellular matrix*
- 12.55-13.15 Discussion

13.15	Lunch
14.15	Excursion
20.00	Conference dinner

## Wednesday 22 June

---

### Session 5: *Biofunctional Surfaces: Medical Implants & Tissues Engineering*

09.00-09.40	<b>Henk J. Busscher</b> (University of Groningen, NL) <i>Microscopic and macroscopic physico-chemical approaches toward microbial adhesion to surfaces</i>
09.40-09.55	Discussion
09.55-10.35	<b>Christine Dupont-Gillain</b> (Université catholique de Louvain, B) <i>Nanostructured bio-interfaces: topographical versus chemical contrast</i>
10.35-10.50	Discussion
10.50-11.20	Coffee break
11.20-12.00	<b>Gabriel Lopez</b> (Univ. of Texas, US) <i>Lipid based systems to deliver interference RNA</i>
12.00-12.15	Discussion
12.15-12.55	<b>Paul Ducheyne</b> (Univ. of Pennsylvania, US) <i>Bioactive ceramics and glasses stimulate cell function through surface and solution mediated effects</i>
12.55-13.15	Discussion
13.15	Lunch

### Session 6: *Contributed Presentations*

16.00-16.45	Speaker 1 Speaker 2 Speaker 3
16.45-17.15	Coffee break
17.15-18.00	Speaker 4 Speaker 5 Speaker 6
18.15-19.00	Poster Session II
19.00	Dinner
20.30	<b>Wolfgang Knoll</b> (Max-Planck-Institute, D) <i>Supramolecular interfacial architectures for biosensing</i>
followed by	Posters session II and drinks

Thursday 23 June

---

**Session 6: Drug Delivery & Targeting**

09.00-09.40	<b>Costas Kiparissides</b> (University of Thessaloniki, EL) <i>Recent Developments in Targeted Drug Delivery Systems</i>
09.40-09.55	Discussion
09.55-10.35	<b>Kazunori Kataoka</b> (University of Tokyo, J) <i>Smart Polymeric Micelles as Nanocarriers for Gene and Drug Delivery</i>
10.35-10.50	Discussion
10.50-11.20	Coffee break
11.20-12.00	Closing Remarks
12.00	Lunch and departure

**All posters are accepted**, unless the Conference Chair informs you otherwise.

With support from

Carl Zeiss AG



Elsevier

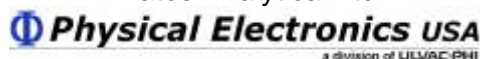
EU FP6 Network 'Frontiers'



Generalitat de Catalunya

Institut Straumann

Kratos Analytical Ltd.



Q-Sense

Stratec-Synthes

Thermo Electron Corporation

The UK's SSBII Network

