



Embassy of Italy
Stockholm



Stockholm
University



AIMES



A platform to discuss the new trends in the field of organic bioelectronics, by gathering scientists from the Italian and Swedish scientific communities working on innovative bioelectronic materials, devices, and their applications.

The scientific program covers among other topics: aspects of sustainable synthesis, alternative raw materials, advanced materials, unconventional device fabrication, and related applications in sensing, implantable devices, tissue engineering, and energy harvesting with the aim of fostering interaction and opportunities to strengthen the bilateral collaboration.

BIOELECTRONICS AND SUSTAINABILITY

26-27 OCT
2023

CAMPUS ALBANO, HOUSE 3, ROOM 4205

Albanovägen 29, Stockholm

26 October

Chair: **Luca Beverina and Erica Zeglio**

09:45 – 10:30 Welcome

10:30 – 11:00 Introduction and welcome note

11:00 – 11:30

Magnus Berggren – Substrate-free organic bioelectronics integrated with living cells and tissues

11:30 – 12:00

Simone Fabiano – Organic electrochemical neurons with ion-mediated spiking

12:00 – 12:30

Michele Di Lauro – Organic neuromorphic devices as building blocks for neuroelectronics

12:45 – 13:45 Lunch break

Chair: **Anna Herland and Luca Beverina**

13:45 – 14:15

Daniel Simon - Organic electronic biosensors for sustainable future healthcare

14:15 - 14:45

Luisa Torsi – Single-molecule bioassays for one-healthcare at the point of care

14:45 – 15:15

Eleonora Macchia – Single-molecule bioelectronic sensor: improving reliability with machine learning approaches

15:15 – 15:45

Beatrice Fraboni – Fully organic flexible detector for real-time dose monitoring during radio/proton therapy

15:45 – 16:15

Onur Parlak – Epidermal sensors for medical diagnostics

16:15 – 16:45 Coffee break

16:45 – 17:15

Fabio Biscarini – Organic neuromorphic devices for in-vitro diagnostics and in vivo neurophysiology

17:15 – 17:45

Maria Rosa Antognazza – Organic semiconductors for regenerative medicine: optical modulation of the cell fate

17:45 – 18:15

Maria Asplund – Why future bioelectronic medicine requires unconventional electrode materials

18:15 – 18:45

Mahiar Max Hamedi – Superstrong electronic hydrogel actuators (ECO)

27 October

Chair: **Sara Mattiello and Luca Beverina**

09:00 – 09:30

Guglielmo Lanzani – Organic phototransducers for abiotic/biotic coupling

09:30 – 10:00

Gianluca Maria Farinola – Living materials for optoelectronics from biopolymers and photosynthetic microorganisms

10:00 – 10:30

Eleni Stavrinidou – Plant bioelectronics for high-resolution monitoring and electronic control of plant processes

10:30 – 11:00 Coffee break

11:00 – 11:30

Mario Caironi – Recent progress in edible electronics and printed organic biosensors

11:30 – 12:00

Peter Andersson Ersman – All-printed organic electronic components and systems for sustainable (bio)electronic applications on flexible substrates

12:00 – 12:30

Erica Zeglio – Sustainable strategies for electrochemical transistor design

12:30 – 13:30 Lunch break

Chair: **Erica Zeglio and Sara Mattiello**

13:30 – 14:00

Christian Muller – Interplay of electrical and mechanical properties of doped conjugated polymers

14:00 – 14:30

Luca Beverina - Conjugated materials from and into interface-rich, water-based microheterogeneous environments. Introducing sustainability in organic electronics

14:30 – 15:00

Alexander Giovannitti – Next-generation polymeric organic semiconductors for electrochemical transistors in aqueous electrolytes

15:00 – 16:00

Round table discussion and closing remarks

16:00 – 17:00 Event closing