

Short report

4th European BioSensor Symposium 2023 in Aachen, Germany

Request for Sponsorship to Bioelectrochemical Society BES: 10.01.2023

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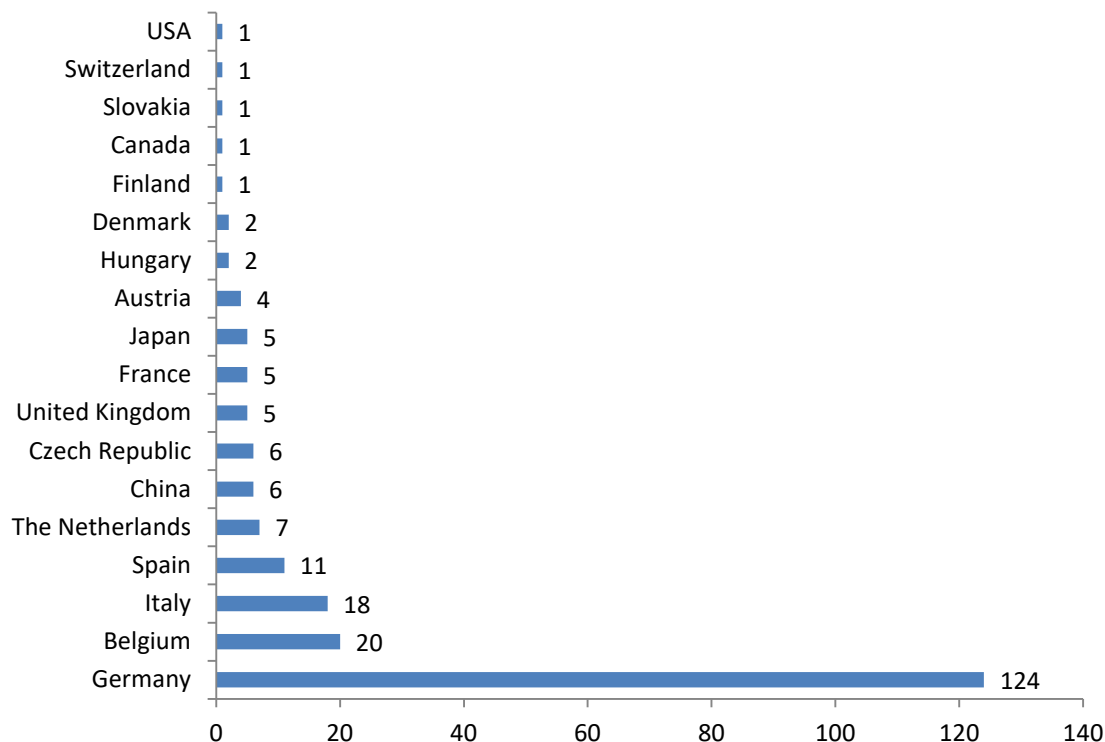
Conference period: 27.08.2023 – 30.08.2023

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The 4th European BioSensor Symposium took place from 27.08.-30.08.2023 at the FH Aachen, Aachen, Germany. The four-day conference was organized by the Institute for Nano- and Biotechnologies (INB) of the FH Aachen. The organizing committee was headed by Prof. Michael J. Schöning (INB / FH Aachen) and his colleague Prof. Dr. Patrick Wagner from KU Leuven, Belgium (see also <https://www.fh-aachen.de/forschung/institute/inb/4th-european-biosensor-symposium-2023>).

221 participants from 18 countries attended the 4th EBS in Aachen to discuss the latest research results in the field of biosensors.



The main topics of the 4th EBS in Aachen were:

- ✓ Technologies for innovative formats such as implantable, non-invasive, single-use biosensors, and paper-based diagnostics
- ✓ Bioengineered and biomimetic recognition elements (MIPs, aptamers, receptors, modified enzymes with increasing catalytic activity, sensor-actuator molecules etc.)
- ✓ Nanotechnology, surface engineering and bioelectronics (single-molecules and molecular sensors, DNA-Origami, nanoparticles and nanostructures enhancing biosensor performance etc.)
- ✓ Cell-based biosensors (e.g., pharma screening, diagnostics, cell toxicity), single cell-based diagnostics (patch-clamp and electrodes, sensors for regenerative therapies)
- ✓ Advances in applications (clinics and „traditional“ areas such as environment and food safety, infection diagnostics including alternative strategies, cultural heritage)

- ✓ Microfluidics and actuators for biosensing and integration
- ✓ Theory, modelling and software development (e.g., multivalence in bio-sensing)

The program included three plenary lectures by Prof. Dr. Evgeny Katz (Clarkson University, Potsdam, USA), Prof. Dr. Tatsuo Yoshinobu (Tohoku-University, Sendai, JP) und Prof. Dr. Fabiana Arduini (Tor-Vergata-University, Rom, IT). 14 keynote lectures provided the introduction to the topics: they came from Prof. Dr. Sabine Szunerits, Prof. Dr. Ilko Bald, Prof. Dr. Jan Vacek, Prof. Dr. Patricia Losada-Pérez, Prof. Dr. Filip Meysman, Dr. Thomas Hirsch, Prof. Dr. Hans-Joachim Krause, Prof. Dr. Bernhard Wolfrum, Dr. Marcus Menger, Prof. Dr. Alberto Escarpa, Prof. Dr. Christina Wege, Prof. Dr. Fabio Biscarini, Dr. Ulrich Rant und Dr. Andrew Baker. The conference program also included 54 individual lectures (see also <https://www.fh-aachen.de/forschung/institute/inb/4th-european-biosensor-symposium-2023/program>).

A total of 117 contributions were presented at the poster exhibition, 28 of which were additionally presented in a 3-minute short talk during a "Short Poster Presentation" session on Monday 28th of August 2023. For both categories, a total of eight poster prizes were awarded to young researchers by two independent poster prize committees.

Sponsors of Poster prizes were *Sensors* (MDPI), *Applied Research* (Wiley-VCH) and *Microchimica Acta* and *Analytical & Bioanalytical Chemistry* (Springer).

The winners of the poster exhibition at a glance:



- ✓ Vivian Hafner (Strauch), Dynamic Biosensors GmbH, Munich, DE
- ✓ Sebastian Freko, TU Munich, DE
- ✓ Selene Fiori, University of Teramo, IT
- ✓ Lei Zhou, FZ Jülich GmbH, DE
- ✓ Susanne Weber, Klinikum rechts der Isar, TU Munich, DE
- ✓ Franziska Dinter, Brandenburg University of Technology Cottbus-Senftenberg, DE
- ✓ Kevin Janus, FH Aachen, DE
- ✓ Andreas Kapp, TH Wildau, DE

Impressions of the conference can be found here: <https://www.fh-aachen.de/forschung/institute/inb/4th-european-biosensor-symposium-2023/photo-gallery>

The next EBS will take place (in October) 2025 in Tarragona, Spain.

