

Duration: 08:30 - 17:50

Room: Krakau

WS-05

Microwave and THz Devices and Circuits Based on Graphene

Organisers:

Herbert Zirath, Chalmers University, Sweden

Renato Negra, RWTH, Aachen, Germany

Abstract

The Graphene Flagship project is a European initiative on the exploration of Graphene and related 2D-materials. It started in 2013 and consist of 156 partners with a total budget of 1B Euro, over 10 years. A part of the project is directed towards new high frequency electronic devices and circuits for applications from low GHz to THz. In this workshop different partners in the flagship will present recent results on devices and circuits for various applications such as flexible electronics, communication and imaging.

Programme

08:30 - 09:00 Growth of Graphene on Different Substrates

Włodzimierz Strupinski, ITME, Poland

09:00 - 09:30 Nonlinear Modelling of Graphene Transistors

David Jiménez, Universitat Autònoma de Barcelona, Spain

09:30 - 10:10 New Graphene Devices for Flexible High Frequency Electronics and Related Circuits

H. Happy, IEMN, University of Lille, Sciences and Technologies, France

10:10 - 10:50 Break

10:50 - 11:40 Frequency Mixers for W-Band (70-110 GHz) Based on a 250 nm Graphene FET MMIC-Process on SiC-Substrate

O. Habibpour, Chalmers University, Sweden

11:40 - 12:30 THz Power Detectors Fabricated on Si and Flexible Substrates

A. Vorobiev, Chalmers University, Sweden

12:30 - 13:50 Break

13:50 - 14:50 Presentation of the European Graphene Flagship Programme

A. C. Ferrari, Chalmers University, Sweden

14:50 - 15:30 New Graphene Based Devices and Circuits on Glass and Flexible Substrates

Daniel Neumaier, AMO GmbH, Germany

15:30 - 16:10 Break

16:10 - 17:00 Micro- and Millimetre-Wave Receiver Frontends and Other Circuits Based on Graphene Devices

Renato Negra, RWTH Aachen University, Germany

17:00 - 17:50 Development of Inverters, Oscillators, and Memory Cells Based on Graphene FETs

Roman Sordan, Polytechnic University of Milan, Italy