

Wednesday, March 23rd 2016

Applications and industry perspectives III

09:00 Graphene-based platforms for biosensing applications

Arben Merkoçi (ICN)

09:30 Electron optics in ballistic graphene

Peter Makk (University of Basel)

10:00 – Coffee break – Topic discussion

10:30

Workshop Sessions

10:30 – Synthesis and properties of 2-D materials +

11:30 Applications and industry perspectives

AKADEMIE I

10:30 – Regulation, standardization, and safety

11:30 *AKADEMIE II*

11:30 – Coffee break

11:45

Plenary Conclusions Session

11:45 Summary: Synthesis and properties of 2-D materials + Applications and industry perspectives

12:00 Summary: Regulation, standardization and safety

12:15 – Closing discussion

12:45

12:45 Lunch

Online Registration & Program

<https://www.nanomat.de/2DMat2016.php>

Deadlines

Poster submission March 1st, 2016
Registration March 14th, 2016

Symposium Fees

Registration fee: 300 € (students: 70 €)
You will receive an invoice shortly after the event.
Invited speakers are exempt from the fee.

Organization

NanoMat
Karlsruhe Institute of Technology, Germany
www.nanomat.de

Swiss Federal Laboratories for Materials Science and Technology, Empa, Dübendorf, Switzerland
www.empa.ch

Bundesanstalt für Materialforschung und -prüfung, BAM, Berlin, Germany
www.bam.de

National Institute of Standards and Technology
NIST, Gaithersburg, MD, USA
www.nist.gov

Organizing committee

Albert Davydov (NIST) – [Website](#)
Angela Hight-Walker (NIST) – [Website](#)
Nathalie Matter-König (KIT) – [Website](#)
Carlo Pignedoli (Empa) – [Website](#)
Christian Punckt (KIT) – [Website](#)
Wolfgang Unger (BAM) – [Website](#)
Peter Wick (Empa) – [Website](#)

Science-Industry-Workshop

// March 21st – 23rd 2016

// Empa Akademie
Switzerland

// Überlandstrasse 129,
8600 Dübendorf
Switzerland
www.empa.ch



<https://www.nanomat.de/2DMat2016.php>



Program

Monday, March 21st 2016

12:30 **Arrival & registration –
Light lunch and get-together**

13:45 **Welcome notes**
BAM, Empa, NanoMat, NIST

Synthesis and properties of 2-D materials I

14:00 **Growth in the flatland**
*Joshua A. Robinson
(Pennsylvania State University)*

14:30 **Graphene quantum structures**
Klaus Ensslin (ETH Zürich)

15:00 **Synthesis and characterization of atomically
precise graphene-based nanostructures:
A simulation point of view**
Carlo A. Pignedoli (Empa)

15:30 – **Coffee break – Topic discussion**
16:00

Regulation, standardization and safety I

16:30 **International standardization on graphene and
related materials**
Norbert Fabricius (KIT)

17:00 **Toxicity of graphene-related materials**
Agnes B. Kane (Brown University)

17:30 **Biodegradation of 2-D materials**
Alberto Bianco (CNRS)

18:00 – **Coffee break – Topic discussion**
18:30

18:30 – **Dinner – Poster session**
21:00

Tuesday, March 22nd 2016

Applications and industry perspectives I

08:30 **Superconducting and cryogenic platforms for
2-D Materials**
Ziad Melhem (Oxford Instruments)

09:00 **Graphene composites for applications in the
manufacturing and energy storage sectors**
Vittorio Pellegrini (Italian Institute of Technology)

09:30 **Solution- and vapor-based synthesis of 2-D
layered materials for nanodevice applications**
Anupama Kaul (University of Texas El Paso)

10:00 – **Coffee break – Topic discussion**
10:30

Synthesis and properties of 2-D materials II

10:30 **Carbon Nanomembranes (CNMs):
Mechanics and gas permeation**
André Beyer (Universität Bielefeld)

11:00 **Surface science on 2-D materials**
Jürg Osterwalder (Universität Zürich)

11:30 **High quality monolayer graphene synthesized
by resistive heating cold wall chemical vapour
deposition**
Monica Craciun (University of Exeter)

12:00 – **Lunch**
12:30

Regulation, standardization and safety II

12:30 **2-D materials standardization**
Wolfgang Unger (BAM)

13:00 **Addressing the metrology barriers for
graphene and related 2-D materials**
Andrew Pollard (NPL)

13:30 **Interaction of graphene oxide and human
intestinal cells in vitro**
Melanie Kucki (Empa)

14:00 – **Coffee break – Topic discussion**
14:30

Applications and industry perspectives II

14:30 **Graphene future emerging technology**
Andrea Ferrari (University of Cambridge)

15:00 **2-D dichalcogenide electronic materials
and devices**
Andras Kis (EPFL)

15:30 **2-D Materials at the air-water interface:
From fundamental studies to applications**
Michael Pope (University of Waterloo)

16:00 – **Coffee break – Topic discussion**
16:30

Synthesis and properties of 2-D materials III

16:30 **Temperature, magnetic field, and dimensiona-
lity effects on the raman spectra of 2H-TaSe₂**
Angela Hight Walker (NIST)

17:00 **Supramolecular approaches to 2-D materials:
from complex structures to sophisticated
functions**
Paolo Samori (Université de Strasbourg)

17:30 **Layered metal dichalcogenide bulk crystals
and thin films: phase diagrams, growth
and properties**
Albert Davydov (NIST)

