

ICREA Workshop on Graphene NanoBiosensors

May 25-26, 2015, Barcelona

PROGRAM



Monday , 25th May

8:00 - 9:00

Registration

9:00 - 9:30

Welcome

SESSION 1

Chair: Prof Kostya Novoselov

9:30 - 10:10

KEYNOTE SPEAKER:

Prof Kostas Kostarelos, *University of Manchester, United Kingdom*
Adoption of graphene materials in medicine

10:10 - 10:25

Dr Kannan Balasubramanian, *Max Planck Institute, Germany*

Chemically functionalized graphene devices for real-time label-free electronic biosensing

10:25 - 10:40

Ryan Bigham, *Swansea University, United Kingdom*

Towards multiplex biosensing - Graphene based biosensor for detection of stroke biomarkers

10:40 - 11:10

INVITED SPEAKER:

Prof Jouni Ahopelto, *VTT Technical Research Centre of Finland, Finland*
Programmable graphene biosensor

11:10 - 11:40

Poster Session and Coffee Break

Monday , 25th May

SESSION 2

Chair: Prof José A. Garrido

11:40 - 12:10

KEYNOTE SPEAKER:

Prof Amin Salehi-Khojin, *University of Illinois, USA*

Two-dimensional nanomaterials for chemical- and bio-sensing

12:10 - 12:40

INVITED SPEAKER:

Dr Amaia Zurutuza, *Graphenea, Spain*

Graphene in sensing applications

12:40 - 12:55

Dr Elisabet Prats, *IMB - CNM (CSIC), Spain*

Impact of chemical functionalization processes on transferred CVD graphene electrical properties for biosensing applications

12:55 - 13:10

Dr J. E. Barrios-Vargas, *Institut Català de Nanociència i Nanotecnologia, ICN2, Spain*

Electronic transport in doped polycrystalline graphene

13:10 - 15:00

Lunch

SESSION 3

Chair: Prof Arben Merkoçi

15:00 - 15:40

KEYNOTE SPEAKER:

Prof Vikas Berry, *University of Illinois, USA*

Graphene interfaced with DNA, bacteria, proteins, spores and liposomes: cybotbots, sensors, wraps, and wrinkles

15:40 - 15:55

Prof Annie Du, *Washington State University, USA*

Graphene-based electrochemical immunosensors for detection of protein biomarkers

16:55 - 16:10

Prof Turchanin Andrey, *Friedrich Schiller University Jena, Germany*

Non-destructive chemical functionalization of graphene FETs for nanobiosensor applications

16:10 - 16:25

Dr Eden Morales-Narvaez, *Institut Català de Nanociència i Nanotecnologia, ICN2, Spain*

Graphene oxide in optical biosensing

16:30 - 17:00

Poster session and Coffee Break

SESSION 4

Chair: Prof Stephan Roche

17:00 - 17:40

KEYNOTE SPEAKER:

Prof Peng Chen, *Nanyang Technological University, Singapore*

Interfacing 0-3D graphene materials with biology

17:40 - 17:55

Dr Alejandro Criado, *University of Trieste, Italy*

Electrochemiluminescent biosensors for prostate cancer diagnosis based on difunctional graphene platforms

17:55 - 18:10

Rhiannan Forsyth, *Swansea University, United Kingdom*

Ultra-sensitive graphene biosensor for stress biomarker detection

18:10 - 18:40

INVITED SPEAKER:

Dr Adrian Bachtold, *The Institute of Photonic Sciences, ICFO, Spain*

Mechanical resonators based on nanotubes and graphene

20:30

Gala Dinner

Tuesday, 26th May

SESSION 5

Chair: Prof Laura Lechuga

09:00 - 09:40	KEYNOTE SPEAKER: Prof Yuehe Lin , <i>Washington State University, USA</i> Graphene-based materials for biosensing and bioimaging
09:40 - 10:10	INVITED SPEAKER: Prof Alberto Escarpa , <i>University of Alcalá de Henares, Spain</i> Graphene and carbon related materials in electrochemical sensing on microfluidic chips
10:10 - 10:25	Prof Ülku Anik , <i>Mugla Sitki Kocman University, Turkey</i> Preparation and electrochemical applications of graphene platinum hybride nanoparticles in electrochemical biosensors
10:25 - 10:40	María Begoña González García , <i>Dropsens, Spain</i> Electrochemical transducers based on graphene materials
10:40 - 11:15	Poster Session and Coffee Break

SESSION 6

Chair: Prof Kostas Kostarelos

11:15 - 11:55	KEYNOTE SPEAKER: Prof Dal-Hee Min , <i>Seoul National University, Republic of Korea</i> Biosensors based on graphene oxide: Towards routine biomedical applications
11:55 - 12:25	INVITED SPEAKER: Dr Mathias Steiner , <i>IBM Research, Brazil</i> A graphene-based, optoelectronic platform for sensing liquids
12:25 - 12:40	Prof María Pedrero , <i>Universidad Complutense de Madrid, Spain</i> Dual functional graphene derivative-based electrochemical platforms applied to the detection of TP53 gene in biological samples
12:40 - 12:55	Dr Sanju Gupta , <i>Western Kentucky University, USA</i> Probing the nature of electron transfer in metalloproteins on graphene-family materials as nanobiocatalytic scaffolds using electrochemistry
12:55 - 13:10	Dr George Machado , <i>INL, Portugal</i> Planar solution-gated graphene field-effect transistors for biosensing
13:10 - 13:30	INVITED SPEAKER: Dr Elena Bailo , <i>WITec Area Manager España & Portugal</i> Visualizing Graphene Properties at Highest Performance and Resolution Using Confocal Raman, AFM, SNOM and SEM
13:30 - 14:30	Lunch

SESSION 7

Chair: Prof Rosa Villa

14:30 - 15:10

KEYNOTE SPEAKER:

Prof José A. Garrido, *Technische Universität München, Germany*
Graphene-based electronics for biomedical applications

15:10 - 15:40

INVITED SPEAKER:

Prof Sven Ingenbrandt, *University of Applied Science Kaiserslautern, Germany*
Wafer-scale processes for biosensor devices based on ultra-thin reduced graphene oxide layers

15:40 - 15:55

Prof Gemma Gabriel, *IMB - CNM (CSIC), Spain*
Neurological recording comparison with different graphene based devices

16:00 - 16:30

Poster Session and Coffee Break

SESSION 8

Chair: Prof Arben Merkoçi

16:30 - 17:10

KEYNOTE SPEAKER:

Prof Ertugrul Cubukcu, *University of Pennsylvania, USA*
Graphene enabled hybrid biosensing and imaging

17:10 - 17:25

Dr Aida Varea, *Universitat de Barcelona, Spain*
The importance of the interband of raman spectrum of graphene oxide

17:25 - 17:40

Prof Nieves Casañ-Pastor, *ICMAB - CSIC, Spain*
Macro and microelectrodes based on iridium oxide-graphene hybrid nanostructured coatings

17:40 - 17:55

Omar Olmedo, *Universitat de Barcelona, Spain*
Light technologies towards graphene devices

18:00 - 18:15

Conclusions

Endorsing Partners



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