

Programme Singapore-EU Workshop

The 1st Graphene Flagship EU-Singapore Workshop on Graphene and related 2D materials

Research innovation in 2D materials and beyond

27-28 March 2023

Singapore

Programme chairs: Prof. Kostya Novoselov (Singapore) and Prof. Stephan Roche (Spain)

March 27th, 2023 Day1		
09:00 – 09:40	Opening remarks	
Plenary session		
09:15 – 09:45	<i>Jari Kinaret</i>	Graphene Flagship: a look at its ten years' voyage and the way ahead
09:45 – 10:15	<i>Barbaros Ozyilmaz</i>	Monolayer Amorphous Carbon and its Applications
Scientific Session 1: Health & Medicine Chair:		
10:15 – 10:35	<i>Liu Bin</i>	Artificial skin for wound healing
10:35 – 10:55	<i>Laura Ballerini</i>	2D materials to modulate brain networks and synapses
11:00 – 11:30	Coffee break	
Scientific Session 2: Industrial Production & Applications of 2DM Chair: Kari Hjelt		
11:30 – 11:50	<i>Andrea C. Ferrari</i>	Layered Materials for Optoelectronics and Quantum Technologies
11:50 – 12:10	<i>Ricardo Oliveira</i>	2DM solutions
12:10 – 12:30	<i>Ken Teo</i>	Wafer scale deposition of Graphene and 2D materials and their integration into devices
12:30 – 14:00	Lunch	
Scientific Session 3: Fundamental of 2DM Chair:		
14:00 – 14:20	<i>Liu Zheng</i>	Synthesis of 2D materials via CVD and CVT methods for electronic and optoelectronics
14:20 – 14:40	<i>Vladimir Falko</i>	Twistronics of 2D transition metal dichalcogenides

14:40 – 15:00	<i>Kedar Hippalgaonkar</i>	Thermoelectric Physics in 2D Materials – Discrete Density of States and Kondo Resonance
15:00 – 15:20	<i>Stephan Roche</i>	Two-dimensional materials for spintronics
15:20 – 15:40	<i>Maxim Trushin</i>	Two-dimensional water: How does it flow?
15:40 – 16:00	<i>Alexey Berdyugin</i>	Giant Magnetoresistance of Dirac plasma in high-mobility graphene
16:0 – 16:20	<i>Justin Song</i>	Quantum non-reciprocity in moiré materials
16:30 – 18:00	End of Day 1	

March 28th, 2023		
Day 2		
Scientific Session 4: Industrial Applications		
Chair:		
09:00 – 09:20	<i>Vincent Bouchiat</i>	Graphene-on-polymer for sensors & healthcare applications
09:20 – 09:40	<i>Juan Alfredo Guevara Carrio</i>	The use of graphene membranes for hydrogen separation
09:40 – 10:00	<i>Francesco Bonaccorso</i>	Industrial production of 2D materials for energy
10:00 – 10:20	<i>Vincenzo Palermo</i>	Laser patterning of 2DM-polymer composites for automotive applications: an example of transnational technology within the Graphene Flagship
10:20 – 10:40	<i>Ricardo Keitel</i>	2D electrolytes and its applications
10:40 – 11:10	Coffee break	
Scientific Session 5: Medical applications and new horizons		
Chair: Johan Ek Weis		
11:10 – 11:30	<i>Guillermo Bazan</i>	Living Bioelectrochemical Composites
11:30 – 11:50	<i>José-Antonio Garrido</i>	Graphene technology for neural interfaces
11:50 – 12:10	<i>Daria Andreeva</i>	2D composites for biointerfaces
12:10 – 12:30	<i>Kostas Kostarelos</i>	Clinical Translation Pathway of Advanced Materials: The Graphene Paradigm
12:30	Concluding Remarks	
12:30 – 14:00	Lunch	
	Lab tour Institute for Functional Intelligent Materials, National University of Singapore	
	Visit to 2DM solutions	