



## Program (v12)

### Wednesday, 18 January 2023

<b>Wednesday 18.01</b>	8:15	<b>Registration</b>			
	9:10	<b>Opening remarks</b>			
	9:30	Karnik	Rohit	MIT (USA)	Nanofluidic Transport across Nanoporous Atomically Thin Graphene and its Development as a Next-Generation Membrane
	10:00	Mi	Baoxia	UC Berkley (USA)	Exploring the Multifunctionality of 2D Nanomaterials for Novel Membranes and Processes

**Break 10:30 - 11:00**

<b>Wednesday 18.01</b>	11:00	Kumar	Manish	U. Texas Austin (USA)	A channel-based paradigm for separation membranes
		Majumder	Mainak	Monash U. (Australia)	Realization of the potential of practical Graphene Oxide membranes for molecular separations
	11:30	Cheng	Chi	U. Melbourne	Move ions and molecules across sheets of atoms: insights and applications
	12:00	Andreeva	Daria	NUS (Singapore)	Artificial ionic channels
<b>12:30 - 14:00</b>		<b>Lunch and poster session</b>			

<b>Wednesday 18.01</b>	14:00	Novoselov	Konstantin	NUS (Singapore)	<b>Colloquium</b>
	14:30				
	15:00	Panel Discussion chair: Rohit Karnik, (MIT)		New Paradigm Membranes Konstantin Novoselov, NUS (scientific perspective) David Menzies, Nematiq (startup perspective) Gurdev Singh, PUB (government agency) Neil Hu, Veolia (system integrator) Beth Henderson, Startupbootcamp (VC/accelerators)	

**Break 16:00 - 16:30**

<b>Wednesday 18.01</b>	16:30	<b>Industrial forum</b>	Short 10-minutes presentations from industrial participants.		
	17:00				
<b>Leaving room by 17:45</b>					

<b>Thursday, 19 January 2023</b>					
<b>Thursday 19.01</b>	9:00	Leburton	Jean-Pierre	U. Illinois Urbana-Champaign (USA)	Interplay amongst Van der Waals, Electrostatics and Dehydration Energies in Ionic Transport through Charged Sub-Nanometer Pores
	9:30	Agrawal	Kumar	EPFL (Switzerland)	Chemistry of graphene at the Å-scale for efficient molecular manipulation
	10:00	Gundlach	Jens	U. Washington (USA)	Using nanopores as the most precise single-molecule tool
	10:30	Meller	Amit	Technion	Solid-state Nanopores and Nanochannels for single protein molecule counting

**Break 11:00 - 11:30**

<b>Thursday 19.01</b>	11:30	Han	Jongyoon	MIT (USA)	Enhanced Transport of Molecules into Nanopores – Application to Dentistry
	12:00	Lim	Chwee Teck	NUS (Singapore)	Microfluidic Approaches to Isolating Micro- and Nanoscale Circulating Biomarkers for Disease Diagnosis and Monitoring
	12:30	Doyle	Patrick	MIT (USA)	Probing complex DNA topologies using nanopores

**Lunch 13:00 - 14:00**

<b>Thursday 19.01</b>	14:00	Strano	Michael	MIT (USA)	<i>Colloquium:</i> Understanding Extreme Fluid Confinement in Single Digit Nanopores - the Center for Enhanced Nanofluidic Transport (CENT)
	14:30				
	15:00	Aluru	Narayana	U. Texas Austin (USA)	Nanofluidic Transport in Low-D Materials: Role of Fluctuations and Quantum Effects
	15:30	Majumder	Mainak	Monash U. (Australia)	Realization of the potential of practical Graphene Oxide membranes for molecular separations

**Break 16:00 - 16:30**

<b>Thursday 19.01</b>	16:30	Joshi	Rakesh	UNSW (Australia)	Graphene oxide membranes for purification and separation
	17:00	Wang	Luda	Peking U (China)	Ionic transport through controllable angstrom- to nanometer-sized pores
	17:30	Yang	Huiying	SUTD (Singapore)	Low-dimensional Nanomaterials for Water Treatment

**Conference dinner 19:00**

## Friday, 20 January 2023

<b>Friday 20.01</b>	9:00	Zhang	Sui	NUS (Singapore)	2D nanoporous and microporous membranes for challenging separations
	9:30	Vogel	Jörg	Aquaporin (Denmark)	Rethinking water filtration with biotechnology and how to upscale
	10:00	Mirsaidov	Utkur	NUS (Singapore)	Nanoscale elastocapillary forces

**Break 10:30 - 11:00**

<b>Friday 20.01</b>	11:00	Zhao	Dan	NUS (Singapore)	Porous Cages as Water Channels in Reverse Osmosis Membranes
	11:30	Kidambi	Piran	Vanderbilt U. (USA)	Selective Nanoscale Mass Transport through Atomically Thin 2D Membranes
	12:00	Drndic	Marija	U. Penn. (USA)	Sculpting of 2D Materials: From Pores and Nanoporous Membranes
	12:30	Marion	Sanjin	IMEC (Belgium)	Nanofluidics with ultrathin nanopores

**Lunch 13:00 - 14:00**

<b>Friday 20.01</b>	14:00	Noy	Aleksandr	LLNL (USA)	Nanofluidics in sub-1-nm carbon nanotube porins
	14:30	Freger	Viatcheslav	Technion (Israel)	Ions in sub-nm carbon nanotubes: charging, transfer and pairing
	15:00	Garaj	Slaven	NUS (Singapore)	Ion transport through 2D nanochannels and nanopores

**Best poster award, conference closing.**

**Post - Symposium activity**

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