

KAUST-BRUKER

Technical Forum Agenda

November 18, 2019

Session 1 Above and Beyond: Latest Development in Mass Spectrometry (Applications to Petroleomics, Metabolomics and Translational Research), and Foodomics

Chair: Dr. Heiko Langner and Dr. Martina Macht

8:15 – 8:45	Guest Arrival, Light Refreshment and Technical Forum Preparation	<i>Building 19, MOSTI Auditorium</i>
8:45 - 9:00	Welcome Remarks Dr. Justin Mynar, KAUST; Dr. Falko Busse, Bruker Biospin	<i>Building 19, MOSTI Auditorium</i>
9:00 – 9:40	Ultra HR-MS without HPLC for Complex Mixtures such as Petroleum, Drug Imaging and Ultimate Throughput in Phenomics Dr. Arnd Ingendoh, Bruker Daltonics	<i>Building 19, MOSTI Auditorium</i>
9:40- 10:20	Proteomics, Phenomics, Spatialomics - Driving Proteomics and Metabolomics towards Clinical Studies by Ultra-Sensitive Mass Spectrometry Dr. Arnd Ingendoh, Bruker Daltonics	<i>Building 19, MOSTI Auditorium</i>
10:20 – 10:40	Coffee Break	<i>Building 19, MOSTI Auditorium</i>
10:40 – 11:20	High resolution MS and NMR for Clean Fuels and Combustion Professor Mani Sarathy, KAUST	<i>Building 19, MOSTI Auditorium</i>
11:20 – 12:00	Catalysts screening in complex chemistries based on detailed product analysis by combining APPI-ESI/FT-ICR with other approaches Professor Pedro Castano, KAUST	<i>Building 19, MOSTI Auditorium</i>
12:00 – 13:30	Lunch break	

13:30 – 14:10	MALDI Imaging of Neurotransmitters, the Blood-Brain Barrier and more Dr. Arnd Ingendoh or Dr. Martina Macht, Bruker Daltonics	<i>Building 19, MOSTI Auditorium</i>
14:10 – 14:50	Microbiology and Diagnostics - The increasing role of Mass Spectrometry in Microbiology and Diagnostics Dr. Martina Macht, Bruker Daltonics	<i>Building 19, MOSTI Auditorium</i>
14:50 – 15:30	Food Safety, Quality and Foodomics - Rapid quantifications in Food quality and safety using Near IR spectroscopy Dr. Hassan Khesbak, Bruker Optics	<i>Building 19, MOSTI Auditorium</i>
15:30 – 15:50	Coffee break	<i>Building 19, MOSTI Auditorium</i>
15:50 – 16:30	Novel Analytical Approaches in Food Testing and Foodomics Dr. Martina Macht, Bruker Daltonics	<i>Building 19, MOSTI Auditorium</i>
16:30 - 17:00	The Lab of the Future – Open Discussion Moderator: Heiko and Martina	<i>Building 19, MOSTI Auditorium</i>

November 19, 2019

Session 2 Advancement in Spectroscopy and Instrumentation and its Applications in Physical Science

Chair: Dr. Kun Li, Dr. Gotz Menges

8:15-8:45	Welcome Guests, Light Refreshments and Technical Forum Preparation	<i>Building 19, MOSTI Auditorium</i>
8:45-8:50	Welcome Remarks	<i>Building 19, MOSTI Auditorium</i>
	Dr. Kun Li, KAUST	
8:50-9:10	Key Solutions Provided by State-of-the-art NMR and EPR Instrumentation	<i>Building 19, MOSTI Auditorium</i>
	Dr. Andreas Kamrowski, Bruker Biospin	
9:10-09:40	EPR applications in materials, solar applications and proteins	<i>Building 19, MOSTI Auditorium</i>
	Dr. Andreas Kamrowski, Bruker Biospin	
9:40 – 10:00	Highlights of Current Magnetic Resonance Applications at KAUST	<i>Building 19, MOSTI Auditorium</i>
	Dr. Christian Canlas, KAUST	
10:00-10:30	Understanding Catalyst in Space and Time Through Spectroscopy	<i>Building 19, MOSTI Auditorium</i>
	Professor Javier Ruiz-Martinez, KAUST	
10:30-10:45	Coffee Break	<i>Building 19, MOSTI Auditorium</i>
10:45-11:05	How FTIR and RAMAN Provide Unique Answers to Material Science Questions	<i>Building 19, MOSTI Auditorium</i>
	Dr. Marten Seeba, Bruker Optics	
11:05-12:05	From Nano to Macro Scale: How XRF,XRD and Analytical Tools for SEM Help in Elemental Analysis and Material Characterization	<i>Building 19, MOSTI Auditorium</i>
	Dr. Gotz Menges, Bruker AXS; Dr. Andreas Wittkopp, Bruker Nano; Dr. Michael Andersson, Bruker Nano	
12:05-12:45	Semiconductor Metrology and Nanotechnology	<i>Building 19, MOSTI Auditorium</i>
	Dr. Sebastian Ollech, Bruker Optics and Dr Gotz Menges, Bruker AXS	
12:45-14:00	Lunch Break	

Session 3 Advancement in Spectroscopy and Instrumentation and its Applications in Biological Science
Chair: Dr. Christian Canlas, Dr. Andreas Wittkopp

14:00-14:20	Ultra-High Field BioNMR Applications Dr. Maksim Mayzel, Bruker Biospin	<i>Building 19, MOSTI Auditorium</i>
14:20-14:40	NMR in the post-static structural biology times Professor Lukasz Jaremkow, KAUST	<i>Building 19, MOSTI Auditorium</i>
14:40-15:00	Path to near atomic resolution of protein complexes in Cryo EM. Dr. Rachid Sougrat, KAUST	<i>Building 19, MOSTI Auditorium</i>
15:00-15:30	Regulatory Tests for Biologics and the Need for Localization Dr. Alsenaidy and Dr. Anwar, SaudiVax	<i>Building 19, MOSTI Auditorium</i>
15:30-15:45	Coffee Break	<i>Building 19, MOSTI Auditorium</i>
15:45-16:05	Novel Computational Methods for NMR, Fluorescence Microscopy and Raman Spectroscopy Professor Xin Gao, KAUST	<i>Building 19, MOSTI Auditorium</i>
16:05-16:25	FTIR Imaging on Tissue Samples - FTIR Microscopy and Imaging of biological Tissues (rapid and invasive Chemical distribution imaging) Dr. Marten Seeba, Bruker Optics	<i>Building 19, MOSTI Auditorium</i>
16:25-16:45	Elemental Distribution Imaging Of Tissue Samples Using MicroXRF Dr. Andreas Wittkopp, Bruker Nano	<i>Building 19, MOSTI Auditorium</i>
16:45 – 17:15	Summary and Q&A Session All	<i>Building 19, MOSTI Auditorium</i>
