

Symposium on Active Matters

Theme: Active matters at the intersection of materials science, biology and nanotechnology

Date **22 November, 2022**

Venue **Centennial Hall, Hokkaido University**

Time	Title	Speaker and Affiliated Institution		Chairman
13:00	Active matter driven by chemical energy	Akira Kakugo	Hokkaido University	Ryuzo Kawamura
13:15	Harnessing the power of a molecular motor for the construction of efficient molecular machine	Jakia Jannat Keya	University of Michigan	
13:30	Attempts to network the driving forces of kinesin-microtubules	Ryuzo Kawamura	Saitama University	
13:45	Spatial organization of microtubules in liposomes	Arif Md. Rashedul Kabir	Hokkaido University	
14:00	Cytoskeletal self-organization and molecular Bioart	Daisuke Inoue	Kyushu University	
14:15	Assembling 3D DNA Snub-cube Origamis in 2D Arrays	Md. Sirajul Islam	UNSW	
14:30	(1) Single-molecule study of BimC to understand the motility mechanism of Kinesin-5 (2) 3D imaging of Actin in cell using super-resolution microscopy	Tanjina Afrin	OHSU	
14:45	Break time			
15:00	Understanding the role of microtubules in cellular mechanotransduction	Syeda Rubaiya Nasrin	Hokkaido University	Arif Md. Rashedul Kabir
15:15	Role of cortactin in force-producing actin network assembly	Mousumi Akter	University of Oregon	
15:30	Stimuli-responsive materials consisting of microtubules	Kazuhiro Shikinaka	AIST	
15:45	Artificial cilia of Biomolecular Motor and a Liquid Crystal Alignment in Meral-Organic Frameworks	Shizuka Anan	Kyushu University	
16:00	Synergy of artificial small molecular engines	Yoshiyuki Kageyama	Hokkaido University	
16:15	Behavior of ciliates in flow fields	Yukinori Nishigami	Hokkaido University	
16:30	Detecting patterns in animal behavior	Evgeniy Podolskiy	Hokkaido University	
16:45	Break time			
Short talk session				
17:00	Introduction			Daisuke Inoue
17:05	The human-microbiome superorganism	Masaki Ito	Metabologenomics, Inc.	
17:10	Force estimation of microtubule's swarm driven by kinesin using electromagnetic tweezer	Mst. Rubaya Rashid	Hokkaido University	
17:15	Role of C terminal tail of tubulin in the interaction between microtubule and its motor protein	Senjuti Nowroz	Hokkaido University	
17:20	Development of functional swarm of microtubules programmed with DNA reaction cascade	Kohei Nishiyama	Hokkaido University	
17:25	Stretching of DNA by using microtubule	Yuto Miura	Hokkaido University	
17:30	Construction of an ultra-compact machine learning device using a biomolecular motor as a reservoir	Gong Yiming	Hokkaido University	
17:35	Concluding remarks	Akira Kakugo	Hokkaido University	