

2023 Structured Laser and Matter – Program

June 16, 2023 (Friday)			
9:20 – 09:45		Workshop Registration	
9:50 – 10:00		Opening Remarks Yung-Fu Chen (group photo)	
Microfabrication with Vortex Laser	10:00 – 10:40	Invited Talk: Takashige Omatsu , Chiba U. Nano/micro fabrication with light fields possessing angular momentum	
	10:40 – 11:20	Invited Talk: Kenichi Yuyama , Osaka Metro. U. Formation and manipulation of liquid microdroplets by optical forces	
	11:20 – 12:00	Invited Talk: Kyoko Masui , Osaka Metro. U. Microstructure fabrication of metal nanoparticle/polymer composite assisted by two-photon polymerization	
12:10 -- 13:30		Lunch	
12:10 -- 13:30		Poster Setup	
Structured Light & 2D Materials	13:40 – 14:20	Invited Talk: Yit-Tsong Chen , NYCU/NTU Nanomaterial-based optoelectronic devices for light emission and photo detection	
	14:20 – 15:00	Invited Talk: Shun-Jen Cheng , EP, NYCU Light-matter interactions between twisted lights and excitons in 2D materials	
	15:00 -- 15:40		Coffee Break
	15:20 -- 16:00		Poster session – students award competition
	16:00 – 16:40	Invited Talk: Ting-Hua Lu , NTNU Structured light- 2D materials interaction: Exploring their optical properties	
16:40 – 17:20	Invited Talk: Yann-Wen Lan , NTNU Twisted light interacts with nanomaterial transistor - electrical properties		
		Poster Remove	

June 17, 2023 (Saturday)				
08:40 – 09:00		Workshop Registration		
Nanophotonics & Trapping	09:00 – 09:40	Session Chair: Kuan-Wei Su EP, NYCU	Invited Talk: Atsushi Taguchi , Hokkaido U. Inverse photonic design as a tool for structured light science	
	09:40 – 10:00		Invited Talk: Hao-Tse Su , AC, NYCU Optical trapping-induced enantioselectivity switch in chiral crystallization of NaClO ₃ using gold nanoparticles	
	10:00 – 10:20		Invited Talk: Po-Wei Yi , AC, NYCU Multilayer assembly formation of lysozyme at solution surface by optical trapping of gold nanoparticle	
	10:20 – 10:40		Invited Talk: Chih-Hao Huang , AC, NYCU Dynamically evolving assembly of gold nanoparticles formed by optical trapping at glass/solution interface	
10:40 – 11:10		Coffee Break		
High-order Structured Laser	11:10 – 11:30	Session Chair: Yan-Ting Yu NYCU LSRC	Invited Talk: Min-Xiang Hsieh , EP, NYCU Gaussian beam formation for variety laser pattern	
	11:30 – 11:50		Invited Talk: Jung-Chen Tung , NTUT Investigating the generation and propagation evolution of multiple orange optical vortices using frequency-doubled Nd:YVO ₄ /KGW Raman lasers	
	11:50 – 12:10		Invited Talk: Pi-Hui Tuang , CCU Stable pulsed operation of Lissajous structured beams by a passively Q-switched concave-convex resonator	
12:10 – 12:20		Closing Remarks		
12:30-13:50		Lunch		
Excursion	14:00 – 16:30	Lab – medical laser system	14:00-14:20	Center Lab and National Lab Visiting
		Lab – personal healthcare	14:20-14:40	
		Transportation		
		Taiwan Space Agency (TASA)	15:10-16:10	
		Transportation		

	Title	Author (Presenter)
1	Polarization dependent optical trapping dynamics of mutual scattering gold nanoparticles and nanodisks at glass/solution interface	<u>Mu-En Li</u> , Chih-Hao Huang, Xu Shi, Kosei Ueno, Hiroaki Misawa, Hiroshi Masuhara
2	Creation of skyrmionic relief Structures in azo polymers through polarization-engineered optical skyrmions	<u>Rihito Tamura</u> , Praveen Kumar, A. Srinivasa Rao, Katsuhiko Miyamoto, Omatsu Takashige
3	High-power structured laser modes: manifestation of quantum green's function	Y. F. Chen, Y. C. Tseng, H. T. Ke, M. X. Hsieh, J. C. Tung, Y. H. Hsieh, H. C. Liang, K. F. Huang, <u>W. C. Chung</u>
4	Using external feedback mirror to control mode-locking depth for Q-switched Nd:YAG solid-state laser and its automation method	<u>Wen-Hao Tsai</u> , Yi-shun Chan, Chih-Chun Hsieh, Yu-Hsiang Huang, Pin-Hsun Wang, Kuan-Wei Su
5	Creating point cloud in mid air by green laser induced breakdown	<u>Yu-Jie Liu</u> , Yi-Pang Ciou, Cheng-Chieh Hsiao, Kuan-Wei Su
6	Self-written microfibers with a first-order bessel beam	<u>Taisuke Onda</u> , Yuto Horiuchi, Masato Kanno, Katsuhiko Miyamoto, Yoshihiko Arita, Takashige Omatsu
7	Ambipolar ReSe ₂ nanosheets-based light-emitting transistors for an electrically pumped nanolaser	<u>Sheng-Yu Pai</u> , <u>Chin-Chien Chang</u> , Hsuan-Ting Ke, Yit-Tsong Che
8	Spectral investigation outside the irradiated area for gold nanoparticles swarming formed by optical trapping	<u>Yu-Sheng Chen</u> , Chih-Hao Huang, Hiroshi Masuhara, Yung-Fu Chen
9	Gold nanoparticle assembling and swarming under different combination of polarization in dual-beam optical trapping	<u>Xin-Xiu Wang</u> , Chih-Hao Huang, Hiroshi Masuhara, Yung-Fu Chen
10	Photothermally enhanced trapping efficiency for protein assembling through gold nanoparticles integration at solution surface	<u>Ke-An Kuo</u> , Chih-Hao Huang, Po-wei Yi, Hiroshi Masuhara