

2020 Hsinchu Joint Seminar of NCTU, NYMU, and NAIST

Time: February 7th, 2020

Venue: Tin-Ka-Pin photonics Building 1F and 6F, National Chiao Tung University

Program

13:00-13:10 **Opening remarks by Teruki SUGIYAMA (NCTU, NAIST)**

13:10-14:10 **Research Progress Reports**

1. 3D Super-resolved imaging of the swarming behavior of nanoparticles during optical trapping

Roger Bresoli Obach (KU Leuven)

2. Optical Trapping Assembling of Protein with Polystyrene Particle at Solution Surface

Po-Wei Yi (DDP student between NAIST and NCTU, graduated from NYMU)

14:20-14:50 **Introduction of NYMU by NYMU students**

15:00-16:30 **Poster 1 : NAIST and NYMU members**

1. Femtosecond laser-induced impulsive force detected by atomic force microscopy
Takashi Araki (NAIST)

2. Analysis of elasticity for plant cell walls by atomic force microscopy
Kenshiro Ito (NAIST)

3. Cell adhesion and migration observed by reflection interference contrast microscopy and controlled by using femtosecond laser impulse
Ryota Mase (NAIST)

4. Improvement of on chip cell sorter utilizing femtosecond laser impulse
Norihiro Teranishi (NAIST)

5. Feasibility study on photoinjection of DNA into plant cells by femtosecond laser
Yuma Ueda (NAIST)

6. Manipulation of micro objects in micro-channel by femtosecond laser-induced impulsive force
Masaya Yamamoto (NAIST)

7. Treatment of gallstones with multi-wavelength semiconductor laser module
Wen-Xiang Zhang (NYMU)

8. Revealing dental plague with differential imaging *in vivo*
Kuan-Yu Huang (NYMU)

16:30-18:00 **Poster 2: NYMU and NCTU members**

1. Investigating ESD defects on VCSELs with optical beam induced current imaging (OBIC) as a function of temperature
Chia-Hao Chen (NYMU)

2. High Temporal Resolution Fluorescence Lifetime Measurement with Stimulated Emission
Tim Shen (NYMU)

3. Optical beam induced current imaging for characterizing ESD induced defects and the failure mechanisms on VCSELs

- Hsiang-En Hung (NYMU)
4. Study on the influence of laser pulse duration in crystal growth of L-phenylalanine induced by laser ablation
Chi-Shiun Wu (NCTU)
 5. Optical trapping-controlled asymmetric photocyclodimerization of 2-antracene-carboxylic acid mediated by γ -cyclodextrin
Tsung-Wei Shih (NCTU)
 6. Enantioselective amplification in chiral crystallization of sodium chlorate by plasmonic optical trapping
An-Chieh Cheng (NCTU)
 7. Directional assembling and scattering of gold nanoparticles tuned by incident angle of trapping laser
Chih-Hao Huang (NCTU)
 8. Linearly-aligned polystyrene particles ejected from their assembly during laser trapping at air/solution interface
Tetsuhiro Kudo (NCTU)

18:00-18:10 Closing Remarks by Hiroshi MASUHARA (NCTU)

Note:

NCTU: National Chiao Tung University, Taiwan

NYMU: National Yang-Ming University, Taiwan

NAIST: Nara Institute of Science and Technology, Japan

KU Leuven: Katholieke Universiteit Leuven