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<b>Session Title</b>	<u>PDP Session</u>
<b>Date &amp; Time</b>	Thursday, 27 August, 18:00 ~ 19:00
<b>Session Chairs</b>	Seung Kwan Kim (KRISS, Korea) Terubumi Saito (Tohoku Institute of Technology, Japan)

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(18:00 ~ 18:12)

### **Vacuum Laser Acceleration of Relativistic Electrons using Plasma Mirror Injectors**

*M. Thévenet<sup>1</sup>, A. Leblanc<sup>2</sup>, S. Kahaly<sup>2</sup>, H. Vincent<sup>1</sup>, A. Vernier<sup>1</sup>, J. Faure<sup>1</sup>, F. Quéré<sup>2</sup>*

<sup>1</sup>CNRS-ENSTA-Ecole Polytechnique, France, <sup>2</sup>CEA-Saclay, France

We report the first experimental observation of Vacuum Laser Acceleration of electrons to relativistic energies, by using a plasma mirror to inject electrons in an ultraintense laser field, and thus produce 10 MeV multi-nC bunches.

(18:12 ~ 18:24)

### **Quasi-resonant Excitation of Quantum Dots in Microfiber-coupled Photonic Crystal Cavities**

*Hee-Jin Lim, Chang-Min Lee, Mireu Lee, and Yong Hee Lee*

*KAIST, Korea*

We examined excitation of InAs/GaAs quantum dots via excited states and optical phonon-exciton interaction, employing  $\mu$ -fiber coupled photonic crystal cavities of which high collection efficiencies benefited us to observe apparent emission and interactions.

(18:24 ~ 18:36)

### **Characterizations of Individual Human Red Blood Cells from Patients with Diabetes Mellitus**

*Sang Yun Lee<sup>1</sup>, Seongsoo Jang<sup>2</sup>, Hyun Joo Park<sup>1</sup>, and Yong Keun Park<sup>1</sup>*

<sup>1</sup>KAIST, Korea, <sup>2</sup>University of Ulsan College of Medicine, Korea

We systematically measure the morphological, biochemical, and biomechanical properties of individual red blood cells from patients with diabetes mellitus using quantitative phase imaging technique to characterize the diabetic red cells with respect to those of the healthy.

(18:36 ~ 18:48)

### **Optical-domain Compensation for Coupling between Optical Fiber Conjugate Vortex Modes**

*Vladimir S. Lyubopytov<sup>1</sup>, Anna Tatarczak<sup>2</sup>, Xiaofeng Lu<sup>2</sup>, Ruslan V. Kutluyarov<sup>1</sup>, Albert Kh. Sultanov<sup>1</sup>, and Idelfonso Tafur Monroy<sup>2</sup>*

<sup>1</sup>Ufa State Aviation Technical University, Russia, <sup>2</sup>Technical University of Denmark, Denmark

We demonstrate for the first time optical-domain compensation for coupling between conjugate vortex modes in optical fibers. We introduce a novel method for reconstructing the complex propagation matrix of the optical fiber with straightforward implementation.

(18:48 ~ 19:00)

### **Stand-alone Scattering Optical Device using Holographic Photopolymer**

*Jongchan Park, Kyeo Reh Lee, and Yong Keun Park*

*KAIST, Korea*

We propose a stand-alone scattering optical device. In order to generate desired optical field behind a highly scattering medium, holographic photopolymer film is used to record and reconstruct an optimal wavefront.

*※ The Happy Hour will take place just prior the PDP session*