Young Researchers Society for Flexible and Stretchable Electronics

3rd event on Tuesday, December 28, 2021

Timeline

9:00-9:10         Opening (Introduction of FSE and how to proceed the discussion)

                         by Prof. Michinao Hashimoto

9:10-10:00       Keynote Lecture 1

                         by Prof. Itaru Osaka (Hiroshima University)

                         40 min : Presentation, 10 min : Q&A

Move to Breakout Session

10:10-11:15     Discussion 1st (5 min introduction, 20 min × 3 presentation)

                         20 min = 10 min presentation, 8 min Q&A, 2 min moving

Move to Breakout Session

11:30-12:35     Discussion 2nd (5 min introduction, 20 min × 3 presentation)

                         20 min = 10 min presentation, 8 min Q&A, 2 min moving

12:35-13:30     Lunch

Move to Breakout Session

13:30-14:35     Discussion 3rd (5 min introduction, 20 min × 3 presentation)

                         20 min = 10 min presentation, 8 min Q&A, 2 min moving

Break & Move to Breakout Session

14:50-15:55     Discussion 4th (5 min introduction, 20 min × 3 presentation)

                         20 min = 10 min presentation, 8 min Q&A, 2 min moving

16:10-17:00     Keynote Lecture 2

                         by Prof. Naoji Matsuhisa (Keio University)

                         40 min : Presentation, 10 min : Q&A

17:00-18:30     Online Party including Award Ceremony and Closing

Detailed Schedule



**Detailed Program for 1st and 2nd Oral Presentation**

※Zoom参加時には、「番号+名前」で表示させてください。番号は1J~11J, 1E~13E, A~E, Chairman1~6等が割り振られています。番号がない方はお名前のみで構いません。

When you join Zoom, please use "number + your name" to display. Numbers are assigned as 1J~11J, 1E~13E, A~E, Chairman1~6, etc. If you do not have a number, you can use only your name.



**Detailed Program for 3rd and 4th Oral Presentation**

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**Keynote Lecture 1**

**Dr. Itaru Osaka (Hiroshima University)　尾坂 格 先生（広島大学）**

**Title: Evolution of Semiconducting Polymers**

**タイトル：半導体ポリマーの進化**

**概要：半導体ポリマーは有機エレクトロニクスにおいて重要な物質群である。本講演では、当グループの研究例を中心に、化学者の視点からこれまでの半導体ポリマーの進化と有機エレクトロニクスデバイスの高性能化について紹介する。**

**Keynote Lecture 2**

**Dr. Naoji Matsuhisa (Keio University)　松久 直司 先生（慶應義塾大学）**

**​​Title: Stretchable Polymer Semiconductor Devices and Early Carrier Development in FSE**

**タイトル：伸縮性高分子半導体デバイスとFSE分野でのアカデミア就活**

**概要：近年、高分子半導体を改質することで、ゴムのような伸長性を示しつつも非常に良好な電気特性を示す半導体材料が開発された。本講演では、これを伸縮性導体材料と組み合わせて実現した高性能な伸縮性半導体デバイスについて紹介する。さらに、PhDをとってから研究室を立ち上げるまでの自分の経験についても紹介する。**

**List of Oral Presentations (Japanese)**

1J K. Okada, T. Hori, T. Fujie

Design of Flexible Pressure Sensor Consisting of Thin-Film Capacitor

2J S. Wakabayashi, T. Arie, S. Akita, K. Nakajima, K. Take

Superhydrophobic and conductive flexible sensor and reservoir computing for estimation of wind and rain volum

3J T. Okada, H. Matsui

Predicting Solubility of Organic Semiconductors in Toluene with Transfer Learning

4J S. Sato, T. Tominaga, K. Yamashita, T. Shimura, S. Abe, M. Ashizawa, H. Ishikuro, N. Matsuhisa

Large-area, stretchable and transparent sensors achieved by high-resolution patternable conducting polymers

5J T. Sato, K. Yamagishi, M. Hashimoto, and E. Iwase

Method to Reduce the Contact Resistivity between Galinstan and a Copper Electrode for Electrical Connection in Flexible Devices

6J K. Murakami, R. Tochinai, D. Tachibana, Y. Isano, R. Matsuda, F. Nakamura, Y. Kurotaki,

Y. Isoda, M. Yamane, Y. Sugita, J. Fukuda, K. Ueno, N. Miki, O. Fuchiwaki, H. Ota

Direct wiring of liquid metal on ultrasoft substrate using a polyvinyl alcohol lift-off method

7J T. Horii, S. Inada, H. Fujita, T. Nagami, T. Fujie

Fluidic strain sensor toward joint angle measurement

8J Taizo Tominaga, Tokihiko Shimura, Shun Sato, Shuma Abe, Naoji Matsuhisa

Reduction of an electrolyte thickness for on-skin stretchable electrochromic displays

9J M. Takakuwa, SW. Heo, K. Fukuda, S. Umezu, K. Tajima, T. Someya

Suppression of Angular Dependence of the Ultrathin Organic Photovoltaics

10J S. Hasegawa, T. Ueno, H. Matsui

Development of Low-Noise Printed Organic Transistors for Biosensor Applications

11J S. Abe, Y. Ochiai, T. Tominaga, T. Shimura, S. Sato, N. Matsuhisa

Stretchable diodes based on n-type semiconductor polymers (Withdrawn)

**List of Oral Presentations (English)**

1E D. Cheng, J. Wang,T. Yokota, T. Someya

Spatiotemporal processing in photoplethysmography for skin microcirculatory perfusion imaging

2E H. Fujita, M. Hao, S. Takeoka, Y. Miyahara, T. Goda, T. Fujie

Wearable ammonia gas sensor using iron(III)-added PEDOT:PSS

3E Yan Xuan, Yuyao Lu, Takayuki Arie, Seiji Akita, Kuniharu Takei

Active-Matrix-Based Flexible Optical Image Sensor

4E W. Wang, MOD. Nayeem, H. Wang, S. Lee, T. Yokota, T. Someya

A flexible and gas-permeable nanomesh humidity sensor with a high sensitivity

5E C. Okutani, T. Someya, T. Yokota

Highly reliable spring-type strain/pressure sensor with inductance change

6E MM. Hossain, S. Tsujimura

Improvement of enzyme and mediator immobilization by porous carbon material and cross-linker towards the glucose oxidation

7E J. Morshed and S. Tsujimura

Self-powered disposable SMBG sensor

8E K. Taguchi, T. Uemura, N. Namba, A. Petritz, T. Araki, M. Sugiyama, B. Stadlober, T. Sekitani

Photopatternable control of threshold voltage in organic transistors for ultraflexible circuits

9E T. J. Wijaya, R. Okano, S. Lee, M. Kobayashi, T. Yokota, T. Someya

Suppression of dark current increase after illumination in ZnO-based organic photodiodes via control of annealing conditions

10E A. Shipei Zhang, B. Sixing Xiong, C. Kenjiro Fukuda, D. Umezu Shinjiro, E. Takao Someya

Light-soaking Free Indoor Organic Solar Cells with Enhanced Stability by the Doping-induced Electron Transport Layer

11E Y. Ochiai, J. Mun, Z. Bao

Insights of mechanical reversibility on stretchable semiconducting polymers

12E T. Suzuki, S. Inoue, T. Hasegawa, H. Matsui

Molecular Dynamics Simulation for the Effect of Substituents in Para- and Meta-Tolyl-BTBT-C10

13E Takuto Aiura, Tomoyuki Yokota, Sunghoon Lee, and Takao Someya

Development of a capacitive pressure sensor that can be fitted with excellent elasticity using nanomesh electrodes