

## Frontier Chemistry Center 講演会 フロンティア化学教育研究センター



## 演 題: Solution-Processable Organic Semiconductors for Electronic and Thermoelectric Application

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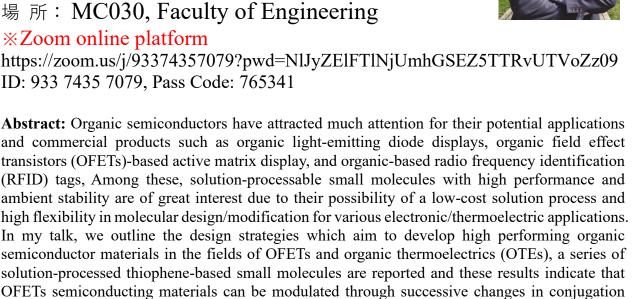
日時: 2023年8月24日(木) 14:45~16:15

場 所: MC030, Faculty of Engineering

**X**Zoom online platform

https://zoom.us/j/93374357079?pwd=NlJyZElFTlNjUmhGSEZ5TTRvUTVoZz09

ID: 933 7435 7079, Pass Code: 765341



## **References:**

1) P.-S. Lin, S. Inagaki, J.-H. Liu, M.-C. Chen,\* T. Higashihara,\* C.-L. Liu,\* "The Role of Branched Alkylthio Side Chain on Dispersion and Thermoelectric Properties of Regioregular polythiophene/carbon nanotubes nanocomposites", Chem. Eng. J., 2023, 458, 141366.

length/side chain substituent length and molecular interaction, based on a combination of molecular design and solution-processing technique. OTEs materials can directly transform the waste heat into the electrical power without causing any pollution but their development is limited due to the poor performance especially low conductivity. Doping organic semiconductors and conjugated polymer composites are used for achieving the enhanced performance, and flexible

2) S. N. Afraj, C.-C. Lin, A. Velusamy, C.-H. Cho, H.-Y. Liu, J. Chen, G.-H. Lee, J.-C Fu, J.-S. Ni, S.-H. Tung, S. Yau, C.-L. Liu,\* M.-C. Chen,\* A. Facchetti,\* "Heteroalkyl-Substitution in Molecular Organic Semiconductors. Chalcogen Effect on Crystallography, Conformational Lock and Charge Transport", Adv. Funct. Mater., 2022, 32, 2200880

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thermoelectric generator based on these materials can be fabricated.

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