

JSPS Core-to-Core/Leverhulme Trust Joint Workshop, Otaru 2014

**“Organic Electronics of Highly-Correlated Molecular Systems”**

24<sup>th</sup>– 25<sup>th</sup> October 2014, Grand Park Otaru, Hokkaido JAPAN

**Friday 24<sup>th</sup>, Oct**

9:30–9:40 Opening Remarks: Kunio Awaga

Chairman: Simon Dalglish

9:40–10:20 Neil Robertson (University of Edinburgh)

“Diverse Metal Complexes for Electronics and Spintronics”

10:20–10:50 Takayoshi Nakamura (Hokkaido University)

“Supramolecular Rotator Structures in Magnetic Crystals”

10:50–11:10 Coffee Break

11:10–11:30 Shin-ichiro Noro (Hokkaido University)

“Rational Design and Realization of Ubiquitous and Biocompatible Metal-Based Porous Coordination Polymers”

11:30–11:50 Nina P. Gritsan (Institute for Chemical Kinetics and Combustion, Russian Academy of Sciences)

“Molecular Magnets Based on Transition Metal Complexes: Quantum Chemical Calculations and Modeling of Properties”

11:50–13:20 Lunch

Chairman: Peter J Skabara

13:20–14:00 Dmitrii F. Perepichka (McGill University)

“ $\pi$ -Extended Anthracene Derivatives as Highly Emissive Organic Semiconductors”

14:00–14:30 Kazuyuki Sakamoto (Chiba University)

“Electronic Structures of Organic Single Crystals”

14:30–14:40 Yoshiaki Shuku (Nagoya University)

“Structures and Physical Properties of Electron Accepting 1,2,5-Thiadiazole 1,1-Dioxide Compounds”

14:40–14:50 Yu Ohshima (Hokkaido University (Nakamura Lab.))

“Structure and Physical Properties of (Fluoroadamantylammonium) (Dicyclohexano[18]crown-6) Supramolecular Cation in [Ni(dmit)<sub>2</sub>] Crystal”

14:50–15:00 Zhang Zhongyue (Nagoya University)  
“Metal Organic Frameworks with Multiple Redox Active Sites as Cathode Active Materials of Lithium Batteries”

15:00–15:10 Yassine Beldjoudi (University of Windsor)  
““Disappearing Polymorph”: the  $\alpha$ -*p*-NCC<sub>6</sub>F<sub>4</sub>CN<sub>2</sub>SSN Radical”

15:10–15:30 Coffee Break

Chairman: Hirofumi Yoshikawa

15:30–15:40 Elena A. Chulanova (Novosibirsk State University)  
“Unified Approach to Synthesis of Chalcogen-Nitrogen Pi-Heterocyclic Radical Anions and Their Isolation in the Form of Homospin Salts of Cation [K(18-crown-6)]<sup>+</sup>”

15:40–15:50 Hsiang-Han Tseng (Imperial Collage London)  
“Fabrication of Molecular Thin Films Based on Magnetic Charge-Transfer Salts”

15:50–16:00 Lorena Giancarlo Soriano (Hokkaido University (Inabe Lab.))  
“Electronic Properties of Hybrid Organic-Inorganic Perovskites and Its Application to Solution Processable Devices”

16:00–16:10 Rie Suizu (Chiba University)  
“Geometrical Frustration Induced by a Hidden Electron-Lattice Interaction in Organic Radical Crystals”

16:10–16:30 Michio M. Matsushita (Nagoya University)  
“Enhanced Magnetic Field Effects on an Indoletrimer-Based Spin-Polarized Donor Due to Its Orbital Symmetries”

16:30–18:00 Poster Session\* with coffee break  
\* Presenters and titles are printed in a final page

18:30– Banquet (Tamotsu Inabe)

**Saturday 25<sup>th</sup>, Oct**

Chairman: Kazuyuki Sakamoto

- 9:30–10:10 Sandrine Heutz (Imperial College London)  
“Applications of Molecular Materials in the Strong and Weak Spin Coupling Regimes”
- 10:10–10:20 Nick Black (University of Edinburgh)  
“Transition Metal Complexes Utilising the Selenoquinoline Ligand for Electronic Applications”
- 10:20–10:30 Paula Camacho (University of St. Andrews)  
“Using <sup>77</sup>Se and <sup>125</sup>Te Solid State NMR to Study Interactions and Properties in Novel Chalcogen-Containing Materials”
- 10:30–10:50 Coffee Break
- 10:50–11:30 Peter J Skabara (University of Strathclyde)  
“Synthesis and Application of Multi-Component Organic Semiconductors for Device Applications”
- 11:30–11:50 Hiroyuki Hasegawa (Hokkaido University)  
“Organic-Inorganic Hybrid Metal-Halide Semiconductors”
- 11:50–12:00 Members’ photograph
- 12:00–13:30 Lunch & Meeting

Chairman: Neil Robertson

- 13:30–14:10 Kathryn Preuss (University of Guelph)  
“Structures and Properties of N-Coordinated Thiazyl Radical Complexes”
- 14:10–14:40 Kunio Awaga (Nagoya University)  
“Crystal Structures and Solid-State Properties of Thiazyl Radicals and Their Related Compounds”
- 14:40–15:00 Alexander L Kanibolotsky (University of Strathclyde)  
“Incorporation of 2,1,3-Benzothiadiazole Unit into Quarterfluorene-Truxene Star-Shaped System”

15:00–15:20 Simon Dalgleish (Nagoya University)  
“Novel Architectures for Organic Photodetectors Operating in the Near Infrared”

15:20–15:40 Yoko Tatewaki (Tokyo University of Agriculture and Technology)  
“Synthesis and Physical Properties of Nanostructures of Several Tetrathiafulvalene Derivatives Having the Side Chains Composed of Chiral and Hydrogen-Bonding Groups”

15:40–16:00 Coffee Break

Chairman: Derek Woollins

16:00–16:30 Tamotsu Inabe (Hokkaido University)  
“Contact Doping: A New Method for Modifying Electronic Structure of Molecular Solids”

16:30–16:50 Lidia S. Konstantinova (Institute of Organic Chemistry, Russian Academy of Sciences)  
“New Approaches to Fused 1,2,5-Selenadiazoles”

16:50–17:10 Oleg A Rakitin (Institute of Organic Chemistry, Russian Academy of Sciences)  
“New Syntheses of Fused 1,2,5-Thiadiazoles - Neutral Precursors of Target Sulfur-Nitrogen p-Heterocyclic Radical Anions”

17:10–17:50 Andrey V. Zibarev (Institute of Organic Chemistry, Russian Academy of Sciences)  
“General Approach to Synthesis of Heterospin Salts of Chalcogen-Nitrogen  $\pi$ -Heterocyclic Radical Anions with Paramagnetic Cations Containing Atoms of 3d-5d and 4f Elements”

17:50–18:00 Closing Remarks & Award Ceremony:  
Derek Woollins & Takayoshi Nakamura

Presenters and titles in the Poster Session

- P01 Masashi Yoshitake (Hokkaido University (Nakamura Lab.))  
“Crystal Structure and Physical Properties of  $[\text{MnCr}(\text{oxalate})_3]^-$  Complexes with Supramolecular Cations”
- P02 Jun Xiong (Hokkaido University (Nakamura Lab.))  
“Designing Ferroelectric Materials by Modulating Polyoxometallates and Supramolecular Cations”
- P03 Shota Nakagawa (Hokkaido University (Nakamura Lab.))  
“Substituent Effect on Molecular Motions in Supramolecular Crystals of (Anilinium Derivatives)(Dibenzo[18]crown-6)[Ni(dmit)<sub>2</sub>]
- P04 Akihiro Yamada (Hokkaido University (Nakamura Lab.))  
“Structure and Dielectric Properties of the Crystals Composed of Supramolecular Cations Having Multi Hydrogen Bonding Sites”
- P05 Chihiro Nanjo (Nagoya University)  
“Carrier Transport and Ratio-Dependent Electronic Structures in Organic Blend Thin-Films”
- P06 Masato Odaka (Nagoya University)  
“Organic Photocells Based on Electric Double Layers in Ionic Liquids”
- P07 Asato Mizuno (Nagoya University)  
“Crystal Structures of Intermolecular Compounds of Naphthalene Diimide-Based Triangular Molecule”
- P08 Keitaro Eguchi (Nagoya University)  
“Preparation and Electronic States of 1,3,5-Trithia-2,4,6-Triazapentalenyl Films on Substrates”
- P09 Matvey Gruzdev (Nagoya University)  
“Novel Carbazole-Based Dendrons Modulated by Tert-Butyl Moieties”
- P10 Hiroyuki Kubota (Hokkaido University (Inabe Lab.))  
“Contact Doping Effects on the Physical Properties of TCNQ Anion Radical Salt”
- P11 Seiya Yokokura (Hokkaido University (Inabe Lab.))  
“Output Characteristics of Organic Transistors around Their Structural Phase Transitions”
- P12 Tomohiro Mikasa (Hokkaido University (Inabe Lab.))  
“Highly Ordered Alignment of Conducting Nano-Crystallites on Organic Semiconductor Single Crystal Surfaces”
- P13 Jun Nitta (Chiba University)  
“Charge Transportation in Rubrene Single Crystal”
- P14 Rosinda Fuentes (University of Edinburgh)

“Synthesis and Characterisation of Novel Hole Transport Materials for Application in Solid-State Dye-Sensitised Solar Cells and Perovskite Solar Cells”

P15 Yassine Beldjoudi (University of Windsor)

“Preparation and Crystal Structures of the Isomeric Series 4-Tolyl-Phenyl-1,2,3,5-Dithiadiazolyl, (*o*-MeC<sub>6</sub>H<sub>4</sub>-C<sub>6</sub>H<sub>4</sub>CN<sub>2</sub>SSN)<sub>2</sub>, (*m*-MeC<sub>6</sub>H<sub>4</sub>-C<sub>6</sub>H<sub>4</sub>CN<sub>2</sub>SSN)<sub>2</sub> and (*p*-MeC<sub>6</sub>H<sub>4</sub>-C<sub>6</sub>H<sub>4</sub>CN<sub>2</sub>SSN)<sub>2</sub>”