

平成 29 年 1 月 23 日

横浜国立大学 グリーンマテリアルイノベーション(GMI)研究拠点

『平成 28 年度 第 3 回クリーンエネルギー材料産官学研究会』のご案内

横浜国立大学大学院工学研究院

教授 渡邊正義

拝啓 時下益々ご清祥のこととお慶び申し上げます。

去る 10 月 12 日に平成 28 年度第 1 回研究会を海外から講演者をお招きし、英語による研究会と致しましたが、本年度は第 3 回研究会も英語による開催としてご案内申し上げます。

本学は、オーストラリアの COE の一つであります、Australian Research Council Centre of Excellence on Electromaterials Science の海外拠点校に指定されています。今回、この COE の主要研究者が奈良で開催されます国際会議、International Battery Association (IBA) 2017 に参加される機会を利用し、この研究会を開催する運びとなりました。日本側招待講演として、首都大の金村教授に JST ALCA-SPRING プロジェクトの概要を、佐々木教授に九州大が進めている World Premier International Research Center (WPI) 事業の中心である水素エネルギー研究についてお話頂く予定です。また、豪州からは Monash 大の MacFarlane 教授、Deakin 大の Forsyth 教授を始めとする主幹教授に加え、若い博士や大学院学生にも話をして頂きます。これに対応して横浜国大側も教員の話から大学院生の話まで盛り沢山に準備しております。

IBA の日程の制約から土曜日の開催となりますが、場所を山下公園近くの県民ホールとし、さらに上記のようなハイレベルで多彩な情報を入手できる内容と致しました。奮ってご参会頂きます様、お願い申し上げます。

敬具

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# 2<sup>ND</sup> YNU-ACES WORKSHOP ON ENERGY RELATED MATERIALS AND DEVICES

Date: March 11<sup>th</sup>, 2017

Workshop venue: Kanagawa Kenmin Hall (Kanagawa Prefectural Hall), Conference Room

( <http://www.kanagawa-kenminhall.com/access> )

## 【 PROGRAMME 】

09:20-09:25 **Opening remarks**

Yokohama National University Prof. Masa Watanabe

09:25-09:40 **Contributed talk:** “Mixed salt systems for safe and stable Li and Na batteries”

Deakin University Prof. Maria Forsyth

09:40-09:55 **Contributed talk:** “Prototyping of beyond Li-ion battery technologies”

BatTRI-Hub, Deakin University Dr. Rob Kerr

09:55-10:10 **Contributed talk:** “Binary mixtures of pressurised CO<sub>2</sub> and solvate ionic liquids (Li<sup>+</sup>-concentrated solutions) as unconventional electrolytes: Properties and Li battery applications”

Yokohama National University Dr. Morgan L. Thomas

10:10-10:45 **Invited talk:** “Research Strategy for Next Generation Batteries in ALCA-SPRING Project in Japan”

Tokyo Metropolitan University Prof. Kiyoshi Kanamura

10:45-11:05

— **Coffee Break** —

11:05-11:20 **Contributed talk:** “Anodic C-C Bond Forming Reactions Using Parallel Laminar Flow Mode in a Flow Electrochemical Microreactor”

Yokohama National University Prof. Mahito Atobe

11:20-11:35 **Contributed talk:** “Highly reversible oxygen to superoxide redox reaction in a sodium containing ionic liquid”

Deakin University Dr. Cristina Pozo-Gonzalo

11:35-11:55 **Contributed talk:** “Solid electrolytes for devices”

Deakin University Prof. Pat Howlett

11:55-12:10 **Contributed talk:** “Homogeneous Tetra-PEG Network Containing Ionic Liquid Synthesized via Michael Addition Reaction and Its Application to Polymer Actuator”

Yokohama National University Dr. Hisashi Kokubo

12:10-12:25 **Contributed talk:** “TBA”

University of Wollongong Dr. Jun Chen

12:25-13:20

— **Lunch** —

13:20-13:45 **“Student flash presentations (5min/person)”**

(1) “Oxygen Reduction Reaction in Highly Concentrated Electrolyte Solutions of Lithium Bis(trifluoromethanesulfonyl)amide/Dimethyl Sulfoxide”, YNU, Ryoichi Tatara

(2) “3D air Carbon based cathode for rechargeable sodium-air battery”, Deakin U, Yafei Zhang

	(3) “Zn Electrochemistry in Ionic-Liquids based Electrolytes under Flow Environment for Redox Flow Battery Applications”, Deakin U, <a href="#">Kalani Periyapperuma</a>	
	(4) “Physicochemical Properties of Glyme-Na Salt Complex / Hydrofluoroether mixtures and Battery Application”, YNU, <a href="#">Shoshi Terada</a>	
	(5) “Electrolytes for Magnesium batteries”, Monash U, <a href="#">Zheng Ma</a>	
13:45-13:55	<b>“Q &amp; A for talks (1) – (5)”</b>	
13:55-14:20	<b>“Student flash presentations (5min/person)”</b>	
	(6) “Electrochemical synthesis of poly(3-hexylthiophene) in a flow microreactor”, YNU, <a href="#">Masatsugu Mizuno</a>	
	(7) “Protic ionic salt derived mesoporous iron doped carbons as an efficient electrocatalyst for oxygen reduction reaction”, YNU, <a href="#">Mahfuzul Hoque</a>	
	(8) “Mesoporous Materials for Electrochemical Energy Storage”, Monash U, <a href="#">Changlong Xiao</a>	
	(9) “Electrochemical method to separate double layer capacitance, pseudocapacitance, and Faradic process on Pt/C”, YNU, <a href="#">Yun Bao</a>	
	(10) “Photostimulated Hydrogen generation on black silicon photocathodes”, Monash U, <a href="#">Ahmed Halima</a>	
14:20-14:30	<b>“Q &amp; A for talks (6) – (10)”</b>	
14:30-14:45	<b>Contributed talk:</b> “Biocompatible Batteries”	
	University of Wollongong	Dr. Caiyun Wang
14:45-15:00	<b>Contributed talk:</b> “Solar Fuels: From Hydrogen to Ammonia”	
	Monash University	Prof. Doug MacFarlane
15:00-15:20	<b>— Coffee Break —</b>	
15:20-15:55	<b>Invited talk:</b> “Hydrogen Energy: A Japanese Perspective”	
	Kyushu University	Prof. Kazunari Sasaki
15:55-16:10	<b>Contributed talk:</b> “Group 4 and 5 metal oxides as precious-metal- and carbon-free cathodes for polymer electrolyte fuel cells”	
	Yokohama National University	Prof. Akimitsu Ishihara
16:10-16:25	<b>Contributed talk:</b> “Advances in water splitting catalysts”	
	Monash University	Dr. Sasha Simonov
16:25-16:40	<b>Contributed talk:</b> “Photoreduction Catalysts for hydrogen production”	
	University of Wollongong	Dr. Pawel Wagner
16:40-16:55	<b>Contributed talk:</b> “Solar Hydrogen Energy Storage Systems”	
	Applied Nano-Technologies	Dr. Noel Dunlop
16:55-17:10	<b>Contributed talk:</b> “TBA”	
	University of Wollongong	Dr. Attila Moser
17:10-17:15	<b>Closing address</b>	
	Monash University	Prof. Doug MacFarlane