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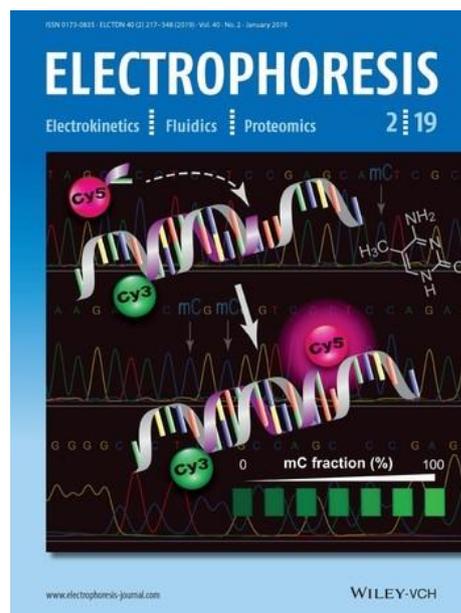
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News

Article of Associate Professor Hashimoto (Faculty of Science and Engineering) et al. Appears on Front Cover of ELECTROPHORESIS for Third Consecutive Year

The article of the research group of Associate Professor HASHIMOTO Masahiko (Faculty of Science and Engineering, the Department of Chemical Engineering and Materials Science) et al. was featured on the front cover of the journal *ELECTROPHORESIS* (Volume 40, Issue 2), published on January 17, 2019, which marks the third consecutive year after 2017 and 2018.

The article is about the assay successfully developed for specific identification of DNA methylation, characterized as the representative example of epigenetic modifications. Associate Professor Hashimoto et al. made it possible to detect DNA methylation more rapidly, more conveniently and more economically than by conventional methods, by utilizing the method of fluorescence resonance energy transfer. This research is expected to enable cancer tests targeting methylated DNA to be carried out at higher speed and at a lower cost than before.



Title of the Article:

‘Separation-free single-base extension assay with fluorescence resonance energy transfer for rapid and convenient determination of DNA methylation status at specific cytosine and guanine dinucleotide sites’

Lead Author of the Article

HASHIMOTO Masahiko

Associate Professor, the Department of Chemical Engineering and Materials Science, the Faculty of Science and Engineering

Co-author

FUJITA Keisuke (Completed Master's Programs in 2017, Applied Chemistry, the Graduate School of Science and Engineering)

The Metal Hydride/air Battery (HAB) Developed by Prof. Morimitsu (Department of Environmental Systems Science, the Faculty of Science and Engineering) Selected for MOE's FY 2019 Low Carbon Technology Research and Development Energy Program

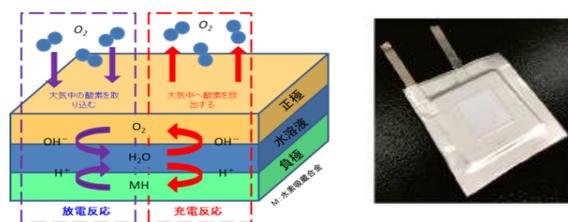
The metal hydride/air battery (HAB * 1) developed by MORIMITSU Masatsugu, Professor of the Department of Environmental Systems Science, the Faculty of Science and Engineering, was selected for the FY 2019 Low Carbon Technology Research and Development Energy Program * 2 of the Ministry of the Environment (MOE). Research and development of HAB has been conducted since 2012 by five institutes (including private companies) led by Prof. Morimitsu under the Advanced Low Carbon Technology Research and Development Program (ALCA * 3), a Strategic Basic Research Program implemented by the Japan Science and Technology Agency (JST). Based on the research results achieved so far, the MOE's FY 2019 Low Carbon Technology Research and Development Energy Program will promote the development of HAB and its electricity storage system and conduct their demonstration experiments with an eye toward commercialization. The HAB electricity storage system is scheduled to enter a societal implementation phase in FY 2022.

For the announcement of programs selected for the FY 2019 Low Carbon Technology Research and Development Energy Program of the Ministry of the Environment (MOE): <https://www.env.go.jp/press/106814.html>

For more details on the results achieved under the Advanced Low Carbon Technology Research and Development Program (ALCA) by the Japan Science and Technology Agency:

https://www.jst.go.jp/alca/kadai/prj_05.html#h24_02

<https://www.jst.go.jp/alca/pdf/result2018.pdf>



(Glossary)

*1 The metal hydride/air battery (HAB)

The discharge performance of an aqueous air secondary battery that uses a metal hydride electrode (negative electrode) and an air electrode (positive electrode) brings about oxygen reduction at the positive electrode and hydrogen release at the negative electrode, thereby producing water. The charge performance of the battery brings about the electrolysis of water, thereby generating oxygen at the positive electrode and absorbing hydrogen at the negative electrode. In other air secondary batteries that use a metallic negative electrode (lithium, magnesium, etc.), the discharge capacity of the positive electrode is restricted because, at the time of discharge, they generate solid reaction products at the positive electrode, causing the plugging of the positive electrode. However, the HAB can prevent such plugging and is free from restrictions in the discharge capacity of the positive electrode, which are major features unique to the HAB. In addition, the HAB, which reacts to water only, does not trade off safety against high energy density. The HAB is expected to become a secondary battery for future generations that achieves a perfect balance between high energy density and safety.

*2 MOE's Low Carbon Technology Research and Development Energy Program

This program aims at the development and demonstration of technology to achieve a drastic reduction in CO2 emissions as part of efforts to further promote global warming countermeasures and eventually create a circulation- and symbiosis-based society, by breaking through technological barriers to enable higher-efficiency technology to drastically cut CO2 emissions at lower cost and by developing and implementing superior technology in the reduction of CO2 emissions. https://www.env.go.jp/earth/ondanka/cpttv_funds/outline.html

*3 Advanced Low Carbon Technology Research and Development Program (ALCA)

The ALCA is a Strategic Basic Research Program implemented by the Japan Science and Technology Agency (JST). Under the R&D strategy developed by the Ministry of Education, Culture, Sports, Science and Technology to continually and steadily promote the reduction of greenhouse gas emissions from mid- and long-term perspectives, the ALCA aims to promote research and development to create new technologies that have great potential for reducing greenhouse gas emissions, based on latest scientific/technical findings, and thereby achieve research and development results that can contribute to the generation of green innovation. <http://www.jst.go.jp/alca/>

Doshisha University Was Selected for FY 2018 MEXT Private University Research Branding Project

Doshisha University was selected for the FY 2018 Private University Research Branding Project (Type B*), which was announced by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) on February 26 (Tues.), 2019. The initiative adopted this time is about establishing platform for integrated research and international base for research cooperation on how to extend healthy life expectancies using the background of space biomedical engineering. Receiving funding over three years from FY 2018 to FY 2020, we will promote our branding efforts for a five-year period until FY 2022.

*Type B: Research that contributes to the advancement of the Japanese or international economy and society and the progress of science and technology

through the establishment of a cutting-edge interdisciplinary research hub The Private University Research Branding Project is a MEXT grant program to support private universities, etc. in promoting their branding efforts centering on unique research activities under the leadership of the president of each individual university. For the FY 2018 Project, 20 universities (11 universities in Type A and 9 universities in Type B) were selected from among 157 applying universities by the Private University Research Branding Project Committee consisting of academic experts, as a result of comprehensive examination of details of the projects submitted and their implementation systems.

The Project for Active Life in Space Engineering and Medical Biology (represented by Prof. TSUJIUCHI Nobutaka from the Faculty of Science and Engineering), which functions as the core of this MEXT-designated project, was already set in motion in April 2018 as a Doshisha University base for advanced education and research, aiming to establish platform for integrated research and international base for research cooperation on how to extend healthy life expectancies using the background of space biomedical engineering.

For more details for the Project, please go to the following link:

<https://space-dream.doshisha.ac.jp/>



Prof. Miyazaki's Seminar (Faculty of Economics) wins a double INIAD Special Award in the 2nd Open Data Challenge for Public Transportation in Tokyo

The awarding ceremony for the 2nd Open Data Challenge for Public Transportation in Tokyo hosted by the Association for Open Data of Public Transportation (ODPT), which involves many public transportation operators and ICT operators, was held on the Akabane-dai Campus of Toyo University on March 29 (Fri.), 2019.

This contest is designed to call for various apps and ideas to make public transportation in Tokyo easier for all people to navigate by using the data disclosed by the public transportation operators that are participants in the ODPT Association. For the 2nd contest, the intra-station map and the facility information of train stations were also made openly available by the Ministry of Land Infrastructure, Transportation and Tourism, which participated in the contest as a co-organizer.

There were nearly 500 entries from home and abroad, and about 60 applications and ideas for the contest this year, out of which two teams from the seminar organized by Prof. MIYAZAKI Ko, the Faculty of Economics, won an INIAD Special Award each.

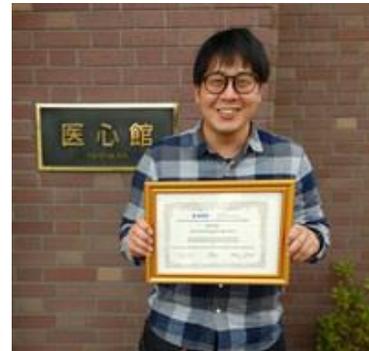


Miyazaki Seminar Members
in Awards Ceremony

Yuta TAMAI from the Graduate School of Life and Medical Sciences Wins 1st Prize Poster Paper Award at IEEE LifeTech 2019

TAMAI Yuta, a student of the Graduate School of Life and Medical Sciences (Major of Biomedical Engineering and Biomedical Information; Neuroethology and Bioengineering Lab.), received the 1st Prize Poster Paper Award in the 2019 IEEE 1st Global Conference on Life Sciences and Technologies (LifeTech 2019) held at the Senri Life Science Center on March 12 to 14, 2019.

The Award is designed to recognize the most outstanding poster paper presentation, based on the presentation performance on the day, from among the research topics that have passed the preliminary screening. Mr. Tamai, who is currently working on the development of an infrared laser-based cochlear implant to help people with hearing impairments, delivered a presentation concerning the safety and practicality of such an infrared laser-based cochlear implant.



Title of the Presentation: Infrared Laser Stimulation of Cochlear Nerve through a Tympanic Membrane

Presentation by (Awardee):

TAMAI Yuta (Doctoral Program, Biomedical Engineering and Biomedical Information, the Graduate School of Life and Medical Sciences)

Co-presenters:

HORINOUCHI Kensuke (Master's Program, Biomedical Engineering and Biomedical Information, the Graduate School of Life and Medical Sciences)

HIRYU Shizuko (Professor, Faculty of Life and Medical Sciences)

KOBAYASHI Kota (Associate Professor, Faculty of Life and Medical Sciences)

Report: Welcome Event for New International Students “Let’s Try “Shakyo” –Hand Copying Sutra-” (presented by SIED)

On April 20th (Sat.), SIED hosted “Let’s Try “Shakyo” ~Hand-Copying Sutra~” at Daikaku-ji temple in Arashiyama as a welcome event for new international students.

Many of the participants were international students who is not familiar with Japanese kanji and writing brush. Although shakyo was quite hard for them, they tried it seriously. Finally, most participants completed their shakyo, and dedicated what they wrote to Daikaku-ji temple with their wish.

In Dakaku-ji temple, there are some historical and famous spots such as “Murasame-no-roka Corridor” and “Osawa-no-ike Pond”. After the shakyo, participants took a lot of pictures there. If you have never tried shakyo, why don’t you go to Daikaku-ji temple once?



Report: Welcome Event for New International Students “Let’s Ride Jikkokubune-Boat! ” (presented by SIED)



On Sunday April 21th, SIED hosted “Kyoto Walking Tour ~Let’s Ride Jikkokubune-Boat! ~” as a welcome event for new international students, and 20 people, including international students, participated in the event.

In this event, the participants visited Heian-jingu shrine and walked around the shrine garden with group members. The garden in Heian-jingu is well known as a Japanese garden designed in Meiji Period. While feeling the nature, participants enjoyed taking pictures each other. After leaving Heian-jingu, we rode a traditional style boat called “Jikkokubune” in Okazaki area. Once getting on the boat, we were able to feel pleasant breeze and enjoy the fresh green view.

Through this event, we hope that participants enjoyed communicating each other and made new friends.

Overseas Offices

Doshisha University's overseas offices were established in order to further promote its rapid and effective internationalization. At our overseas offices, we are implementing mainly public relations activities to increase the profile of Doshisha University, while at the same time making the most of the characteristics unique to each office. In addition, we are undertaking various efforts to recruit overseas students, support our students while they are studying overseas, and provide on-site support to members of our faculties while they are overseas.

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Greetings

Message from Dean of the Center for Global Education, Dean of the Center for Japanese Language and Culture



Greetings from Doshisha University in Kyoto, Japan

In April 1999, the Center for Japanese Language and Culture (CJLC) opened its door for international exchange and regular students to learn Japanese language and culture here in Doshisha. Students are able to take a variety of courses according to their Japanese language proficiency and their interest in Japanese culture with well-organized curriculum.

In April 2016, we launched a new center, the Center for Global Education (CGE). The CGE program offers inter-disciplinary courses all conducted in English and provides in-depth learning opportunities in different fields ranging from Humanities, Social Sciences, and Natural Sciences designed for international exchange students and Japanese students to foster a better understanding of Japan in a global context.

Besides academic environment above, you could experience a lot outside campus. Doshisha is located in Kyoto, one of the most historical and traditional city in Japan. Surrounded by such rich cultural resources, we hope, your study and student life here will become invaluable and vibrant.

Professor Satoshi TAGUCHI, Dean of the Center for Global Education, Dean of the Center for Japanese Language and Culture

Greetings from Office of the Center for Global Education and Japanese Language

Our office is in charge of managing two centers, the Center for Global Education and the Center for Japanese Language and Culture. They offer diverse courses for both international students and Japanese students to learn together about Japanese traditional culture and art and cross-cultural understanding.

Let us introduce one of the courses “The Tradition and Culture of Japan—Japanese Culture and Kyoto Life through Kimono-”. This course includes not only lectures about the history of Japanese traditional outfit *Kimono* and traditional dyeing techniques but also fieldworks to a *Kyo-yuzen kobo* studio and a *Nishijin-ori kobo* studio, where students have opportunity to wear *Kimonos* and learn the manners in the Japanese traditional clothes. This course is provided to both Japanese and international students. One of the students shared the comment “The class allowed the students to discover good aspects of Japan through both international students’ and Japanese students’ perspectives.” The collaboration between Japanese students and international students would be great benefit for them to cultivate Japanese knowledge in global perspectives.

We are looking forward to seeing you soon!

Kind Regards,

Office of the Center for Global Education and Japanese Language



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