



UQ-KU Project

九州大学 研究教育交流拠点

UQ-KU Project Newsletter

February 2019

THE UNIVERSITY OF QUEENSLAND – KYUSHU UNIVERSITY OCEANIA PROJECT

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UQ-KU Project Lecture Series

Kyushu University hosted Professor Kazuhiro Nogita who delivered his lecture series (in English) entitled Energy Materials. The lectures were given in English to Kyushu University Masters' students.

Mr Jonathan Read also visited Kyushu University during December of 2018 to deliver the annual lecture series on Engineering Ethics to Kyushu University's international student cohort.

UQ-KU Collaborative Research

Two researchers from the University of Queensland travelled to Fukuoka to work collaboratively with Professor Syo Matsumura, director of The Ultramicroscopy Research Centre, Kyushu University and other members of his research group.

Ms Shiqian Liu used the UHV-TEM to observe crystallographic changes during in-situ heating/cooling of Ga alloy and solder joints.

Ms Xin Fu Tan was investigating new manufacturing methods for advanced anode materials for lithium ion batteries.

UQ Undergraduate Student Interns at Kyushu University

Stephen Lyth. This is an exciting opportunity for Mr Partoredjo as Kyushu University has great expertise with hydrogen fuels cells.



Mr Jonathan Read with the Kyushu University 3rd Year Engineering International Students

Mr Nelson Partoredjo a University of Queensland mechanical engineering undergraduate student, who participated in the UQ-Japan Program for Industry Experience (UQ-JPIE) supported by New Colombo Plan last year, is currently enjoying an internship at Kyushu University.

Mr Partoredjo will be working on hydrogen fuel cells under the supervision of Professor Akari Hayashi and Associate Professor

The UQ-JPIE programme will run again this year and a further 15 UQ engineering undergraduate students will travel to Kyushu University to participate. This programme is supported by the Australian Government's New Colombo Plan and facilitated by the UQ-KU Oceania Project and the Kyushu Economic Federation (KEF). It remains a wonderful opportunity for UQ students to be exposed to advanced manufacturing companies and techniques.

LOOKING FOR ATOMS

" This was our second visit to Kyushu University (KU). This time we were on a mission to "see" atoms, with the transmission electron microscopes (TEM) housed in the Ultramicroscopy Research Centre (URC). These state-of-the-art microscopes can take us to a world that is magnified more than 100 million times, where we spent many sleepless nights looking at our samples in atomic scales. Wenhui Yang-san and Kohei Aso-san, fellow PhD students from the Matsumura Lab supported us throughout our stay in KU. Apart from their excellent TEM skills, we learnt that Yang-san is also the chairperson for the Chinese overseas student association in Kyushu, while Aso-san sings as a tenor in the multi award winning Kyushu University choir. Multi-talented people.



After the night sessions on the microscopes, our walks back to the dormitory in the bitter winter nights were often accompanied by hot can drinks from the vending machines. At 11-1am, a considerable number of labs and dormitory rooms were still lit, and students were still studying in the common areas in the dormitories. 3-4am was probably the quietest time of the day. In a few odd cases when we finished after 5am, people were already starting to head towards the University to start another day.

The Matsumura Lab bonenkai, or the end-of-the-year party, was held relatively early this year on 13 December. We joined their celebrations for the second year in a row. This time the party was held in a restaurant which specialises in traditional Japanese chicken dishes, including teppanyaki chicken, chicken dumplings and chicken sashimis made in many different ways. After sharing a few drinks (alcoholic and non-alcoholic), we got to know the other students and researchers in the group a bit better.



Compared to last year, we were equipped with better TEM knowledge and are more experienced this year. This enabled us to be more appreciative of the kind of work being conducted in the URC and the Matsumura Lab, and to learn more readily from the rich vault of knowledge and know-hows they offer. Our samples were very different from those Yang-san and Aso-san are used to work with, and through this we had some exchange of skills and knowledge. We hope to bring these skills back to UQ and apply them on our new TEM when it is ready in the near future.

Xin Fu Tan & Shiqian Liu

FOR MORE INFORMATION VISIT

<http://www.mechmining.uq.edu.au/uq-ku-project>