

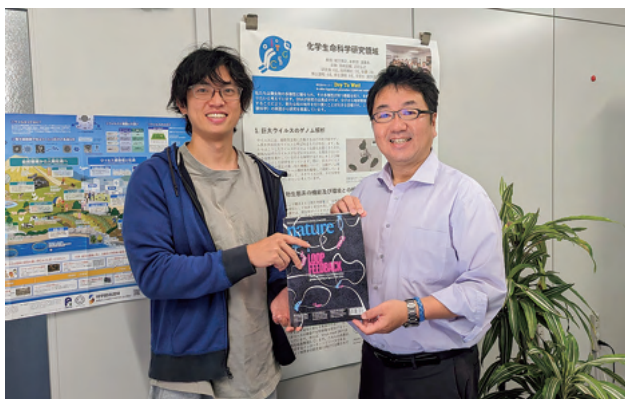
ICR News 2023

Recently Published in *Nature*!

“Mirusviruses Link Herpesviruses to Giant Viruses”

■ MENG, Lingjie and Prof OGATA, Hiroyuki

On April 19th, our work was published in *Nature*. In this work, we discovered a novel group of large DNA viruses dubbed “*Mirusviricota*”. Most of double stranded DNA viruses are classified into one of two realms: *Varidnaviria*, which includes giant viruses, and *Duplodnaviria*, which includes herpesviruses causing diseases in animals. These two realms have been considered evolutionarily unrelated. However, the newly discovered mirusviruses possess features of both realms. Genes of “informational module” for genome replication and gene expression were similar to those of *Varidnaviria*, while genes of “virion module” that encode structural proteins were similar to those of *Duplodnaviria*. This mosaic feature of mirusviruses suggests that herpesviruses evolved from tailed bacterial viruses via ancestral protist-infecting viruses, namely the ancestors of the modern day mirusviruses and herpesviruses. Furthermore, gene transfers of “informational genes” between the two realms probably played crucial roles in their evolution. Mirusviruses appear to be prevalent and abundant in the sea and likely infect a variety of protists. However, they were discovered by bioinformatics analyses of marine metagenomic data, and there are currently no cultured viruses from this group of viruses. This work was achieved by a collaboration with groups of scientists in France and Denmark.



10th Pacific Symposium on Radical Chemistry (PSRC-10)

■ Prof YAMAGO, Shigeru

PSRC-10 was held at Obaku Plaza, Uji Campus. Since its establishment in 2004, the PSRC has aimed to promote the development of organic radical chemistry in the world and mutual exchanges among researchers. A total of 186 researchers from 18 countries gathered for 55 oral research presentations (3 keynote lectures, 28 special invited lectures, and 24 invited lectures) and 91 poster presentations. Recent research results in a wide range of fields were presented, including reaction development using photo-redox catalysts, precise polymer synthesis, and material creation using radicals, and design, synthesis, and theory of complex molecules in which multiple radicals interact with each other. The participants were able to interact with each other in a relaxed atmosphere. Twelve students and post-doctoral fellows were selected as poster award winners and presented with awards at the closing ceremony.

Through these activities, we believe that we have successfully achieved the original purpose of this conference, which was to further develop research in organic radical chemistry and to provide a forum for international exchange among the research community. We would like to express our deep appreciation for the cooperation and support not only of the conference participants, but also of all the people involved.



New Collaboration Project Starts

Memorandum of Understanding Signed between Sungkyunkwan University's Institute for Energy Science and Technology and ICR

■ Prof WAKAMIYA, Atsushi

On June 5, 2023, a delegation from Sungkyunkwan University (SKKU) led by Prof. Nam-Gyu Park, the director of SKKU's Institute of Energy Science and Technology, visited ICR. The purpose of the visit was to participate in the 1st Kyoto-SKKU Workshop, which was held in cooperation with Prof. Wakamiya's laboratory. During the workshop, a Memorandum of Understanding (MOU) was signed between the Institute of Energy Science and Technology, SKKU, and ICR, Kyoto University (Director, Prof. Takashi Aoyama) to encourage interdepartmental academic exchange. A collaborative project on perovskite solar cells was launched with the support of the International Collaborative Research Program of the Institute for Chemical Research (ICR), Kyoto University, and the Korean National Research Foundation (KNRF). This initiative led to the establishment of the SKKU-Kyoto University Perovskite International Research Collaboration Center (PIRCC) within the Institute of Energy Science and Technology at SKKU in Korea.



ICR Hosted Four Student Awardees from the Philippines

On the occasion of *Talent-Spot 2023 Manila* held in January 2023, ICR Travel Award was presented to 4 top-performing students out of 17 student candidates from the Philippines. In March 2023, the awardees, two of them were from University of the Philippines Diliman, and one each of the other two were from University of Santo Tomas and De La Salle University.

They were invited to participate in a week-long research training at the laboratory of their utmost interest at ICR, Kyoto University. At the conclusion of the training program, each of the awardees gave a short presentation of their research experience at ICR. Through the relaxed and open discussion, the students interacted with young researchers and faculty members of ICR to promote networking. One of the students, Matthew Denwell Herrera, will join an ICR laboratory as a MEXT scholar and pursue a Master's degree from Kyoto University.

