Message from the Director

In August 2022, I was honored to assume the role of the Director of the NSRRC. Despite the ongoing challenges posed by COVID-19, the year 2022 ended on an optimistic note for the NSRRC. I am delighted to inform that we have resumed most of the NSRRC's outreach activities and conducted numerous need-based training programs as scheduled. Notably, the numbers of attendees and research posters at our annual Users' Meeting were the highest thus far. These endeavors highlight the NSRRC's unwavering commitment to meeting the synchrotron radiation research requirements of our users.

In response to the requirements of our users, the NSRRC strives to offer the highest standards of synchrotron light and research facilities. The Taiwan Light Source has consistently been a major asset in facilitating scientific breakthroughs, and the Taiwan Photon Source (TPS) accelerator has reached a stable operational stage, marked by a significant increase in the mean time between failures. More importantly, the TPS has been equipped with cutting-edge experimental facilities, such as the world-class ultrahigh resolution RIXS station, the unrivaled QEXAFS station in Asia, highly efficient PX stations, and many other advanced stations for solving challenging problems. With these comprehensive facilities, the NSRRC is positioned to take scientific research to new heights.

In 2022, the adaptability and agility of the NSRRC in responding to the pandemic were crucial. Although the number of international users decreased inevitably, the overall research output steadily increased and reached a new zenith. I am elated to report that more than 600 research articles were published in 2022 by using our facilities, including numerous noteworthy articles in prestigious journals, which have far-reaching effects on society. These accomplishments attest to the dedication of both our users and staff members, bringing our vision of advancing scientific frontiers to reality.

To further expand and extend our scientific research and development, the NSRRC is committed to facilitating the use of various techniques in research, particularly in high-demand domains such as semiconductors, biomedicine, and energy. The NSRRC has planned to launch Interdisciplinary Program and received positive feedback from researchers exhibiting strong interest. Through a range of research techniques, the NSRRC seeks to engage beamlines in exploring challenging subjects collectively, gaining new insight, and broadening scientific discoveries with unlimited potential.

As a key contributor to domestic and international advancements in science and technology, the NSRRC continues to collaborate with leading universities and research institutions globally. The NSRRC has also made steady progress in industrial applications, notably in lithium-ion batteries, semiconductors, steel technologies, and technology transfer.

In 2022, we were delighted to reconnect in person with our worldwide users at the NSRRC. With its state-of-the-art facilities, dedicated staff members, and supportive users, the NSRRC is committed to joining forces with global research communities to make significant contributions to the advancement of scientific knowledge and overall benefit to society.

Chia-Hung Hsu
Director