

# Message from the Director

“ Time flies when you are having fun.” How true it is that my term as the Director is winding down in next few months. At NSRRC, we began in the early eighties with a visionary decision to construct the first synchrotron light source in Taiwan. Today, after more than 30 years, NSRRC remains as a vibrant research facility with two operational synchrotron light sources, including 1.5 GeV Taiwan Light Source (TLS) and the state-of-the-art 3.0 GeV Taiwan Photon Source (TPS). In 2017, we had about 2,300 users (12,000 user visits) from 21 countries coming to TLS/TPS for their research endeavors in a wide range of disciplines, which produces about 350 scientific publications (20% of them in the top-tier journals of respective fields). Our diverse expertise in accelerator, instrumentation, experimental technique, and scientific research has helped users to pursue academic excellence, cross-disciplinary collaboration, and to elevate social impact by research outcomes.



Despite its long-term operation, TLS has maintained outstanding performance. The record of mean time between failures achieved a historic peak (~259 hours) in 2017. On the other hand, TPS has reached a stored electron current 400 mA in top-up operation. While most of TPS phase-I beamlines have been open to users, the phase-II beamline construction is well under way. With all these accelerator technologies and frontier scientific studies, NSRRC recently added a new dimension to its role to emerge as an important driving force in technological innovation and transfer by creating the Industrial Liaison Office, which is aimed to connect research and industry for social advancement.

In 2017, we had a joint press conference to announce a plan to establish the Max Planck–NSRRC/NCTU/NTHU Center for Complex Phase Materials in Hsinchu, Taiwan. This Center is intended to nurture young scientists and to strengthen interdisciplinary collaborations. Several home institutes of our users, such as Max-Planck-Gesellschaft, National Tsing Hua University (NTHU), Academia Sinica, and Tamkang University, have collaborated with NSRRC to build beamlines or endstations at TPS. NSRRC, as always, is dedicated to promote synchrotron-related science and experimental techniques through workshops, training courses and joint degree programs. For the promotion of public awareness, we also organized events to reach out to the younger generations. Last summer, with National Space Organization (NSPO) in Hsinchu, we co-organized a successful science festival, covering popular themes of space, arts, and paleontology. In this event, all attendees had an exclusive open-house experience at NSRRC and NSPO.

The development of synchrotron-based science and technology has matured rapidly in the last few decades. Nevertheless, we can still foresee an even brighter future. As usual, our mission is to foster partnerships that will engender scientific accomplishments to benefit our society. For this, I would like to acknowledge all the TLS/TPS users for their everlasting pursuit of scientific discoveries and the hard work from our staff toward the impeccable facility operation. I look forward to your continued partnerships with NSRRC as we move steadily into the future.

A handwritten signature in black ink, appearing to read "Shangjr Gwo".

Shangjr Gwo  
Director