

Message from the Director

NSRRC is a multidisciplinary research institute evolving an integrated environment, probing for the validation of a world of the nanoscale, contributing to the growth of advanced discoveries, and mapping knowledge into a structural form of future technology. NSRRC staffs have been devoting to the optimization of the capabilities of our experimental facilities, advancing accelerator technologies, promoting synchrotron-related science and technology, collaborations, and striving for scientific excellence.

Over the past year, the engagement of our users in the construction of new Taiwan Photon Source (TPS) beamlines and scientific researches are impressive. The number of users continued increasing, with international users reaching nearly 17%, and the compound factor of quantities and impact significance of their research output in publications surged more than thirty percent. In the first quarter of 2019, TPS marked a new milestone by obtaining an operating license for a beam current of 500 mA in top-up operation. While the Accelerator team was optimizing the TPS accelerator, the Experimental Facility team was expanding TPS beamlines in parallel making four more TPS beamlines completed in 2019. Furthermore, the Phase II beamline instruments of TPS are scheduled to be ready within two years.

As one of the large-scale scientific research facilities in the world, NSRRC is committed to the worldwide collaborations in terms of science and technology. In May, Taiwan-Germany Experimental Facility–TPS Submicron Soft X-ray Spectroscopy Beamline was officially launched. This collaboration includes a wide array of collaborative projects and brings collaborative partners from Germany, South Korea, and Taiwan to work side by side at the TPS. Through collaborations in sharing expertise, innovative ideas, and resources across disciplines, international researchers are able to piece a vast scale of critical information together in an unprecedented speed to serve the needs of society, as we now witness in the case of fighting the coronavirus epidemic.

The year of 2019 was an eventful year. With more TPS beamlines completed and more new research opportunities to offer, NSRRC scientists organized workshops to explore latest scientific topics and training courses of various experimental techniques, hoping to attract more users to fully take advantages of our facilities. Besides the professional development for science students and researchers, we also offered science education programs to the general public, particularly targeting youngsters, for example special science projects to high-school and college students.

All these progress will be impossible without the support of our users, the funding agency, and our colleagues. It is envisioned that NSRRC will play a critical role in emerging research fields by offering new academic research platforms and proven advanced techniques for industrial applications delivered significantly faster than any conventional approaches. The NSRRC teams will continue our effort in global endeavors to pursue and support brilliant science.



A handwritten signature in black ink, appearing to read "Gwo-Huei Luo".

Gwo-Huei Luo
Director