

# APNFO13

**The 13th Asia-Pacific Conference on Near-Field Optics**  
**July 29-31, 2022, Hokkaido University, Sapporo, Japan**

**Hybrid format**

Organizers: **Japan Society of Applied Physics, Nano Optics Group, The Optical Society of Japan, Plasmonic Photochemistry Society of Japan**

## OVERVIEW

**The Asia-Pacific Conference on Near-field Optics (APNFO)** has provided an opportunity for leading scientists and young researchers in the field of nano-optics to discuss new ideas and approaches in cutting-edge research, and to network with each other. APNFO has been held every two years, following the first meeting in Seoul in 1996, in Beijing, Melbourne, Taroko, Niigata, Yellow Mountain, Jeju, Adelaide, Singapore, Hakodate, Tainan, Xiamen and will be held in **Sapporo, Japan in 2022**.

Rapid progress in nanoscience and nanotechnology has made near-field optics more attractive and applicable to various research fields on condensed matter physics including chemistry and biology. The unique characteristics of light-matter interactions on the nanoscale have provided a tool for microscopic study to pursue basic science interests, including the quantum mechanical nature of light and electrons. It has also brought a discipline to address engineering and manufacturing challenges for making devices smaller, faster, and more energy-efficient, and more importantly, for promoting conceptually new device paradigms. In the coming phase, the near-field nano-optics is expected to be applied not only to biosensors and nanofabrication technology, but also to light-energy conversions and storages such as solar cells and artificial photosynthesis. At APNFO13, we organize a special session entitled "Hot carrier sciences and its application to light-energy conversions" to allow participants to share their experiences, problems, and concerns, and to discuss promising future directions. In addition, keynote and invited speakers are also arranged to exhibit the current trends in near-field optics, which will inspire and motivate young researchers and students.

**A summer school will be also held in the evening of the day before the conference (July 28, 2022). The summer school is held to provide education for young scientists and students as a pre-conference of APNFO13.** Three or four tutorial lectures will be given by leading researchers in this field. Therefore, many students are also expected to participate.

## TOPICS

- Novel concepts and phenomena in near-field nano-optics
- Theory and modeling in nano-photonics
- Near-field enhancement phenomena
- Nonlinear and quantum optics of near-field regime
- Plasmonics
- Fano resonance
- Strong coupling
- Metamaterials
- Infrared and THz technology
- Hot carriers
- NSOM, super-resolution and nanofocusing
- Nano-optical fabrication and manipulation of matters
- Nano-optical characterization, optical spectroscopy and instrumentation
- Nano-photonic materials, structures and waveguides, devices and designs
- Applications in sensing, solar cells, condensed matter physics including chemistry and biology etc.

**Postponed!**

## IMPORTANT DATES

**Abstract submission deadline: April 15, 2022 (23:59 JST)**  
**Online registration (early bird) by: July 15, 2022 (23:59 JST)**



## International Advisory Committee

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## FURTHER INFORMATION

<http://www.nano-optics-group.org/apnfo13/>