

POLARITONS IN EMERGING MATERIALS

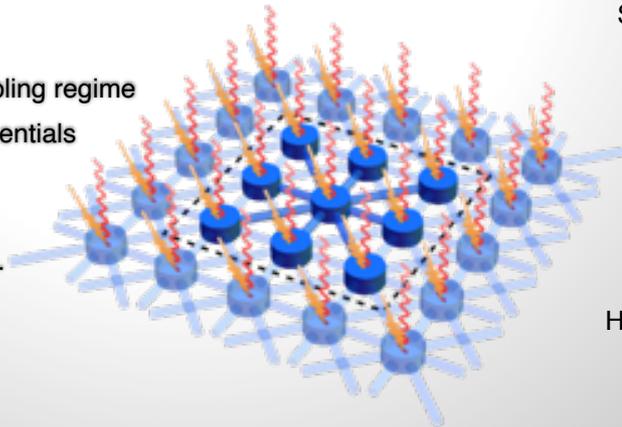
INTERNATIONAL WORKSHOP

September 11 – 15, 2023

Semiconductor microcavities increase the coherence of photons due to hybridization with excitons localised in the structure. The resulting hybrid modes called exciton polaritons are coherent, highly nonlinear, spin sensitive, ultrafast, and show sensitivity to applied electric and magnetic fields. This combination of properties together with advances in material patterning technology allow for access to a wealth of fundamental effects, including, for example, polariton condensation, pattern formation, topological physics, and antibunching. We aim at discussing the frontiers of exciton-polariton transport in semiconductor microcavities with the world-leading experts. The particular emphasis will be on the rapid developments of novel materials and the potential device concepts.

Topics include:

- ▶ Two-dimensional transport in strong-coupling regime
- ▶ Exciton-polaritons in artificial periodic potentials
- ▶ Hybrid Bose-Fermi systems
- ▶ Exciton-polaritons in novel materials (including TMDs, organic materials, wide-bandgap semiconductors, perovskites)
- ▶ Exciton-polariton devices
- ▶ Polariton-based networks



To participate in the Workshop, complete the online application form by July 31, 2023.

Workshop registration fee: 200,000 KRW (for all on-site participants)
Accommodation costs and meals will be covered by the PCS IBS.
Limited funding is available to partially cover travel expenses.

For further information, see pcs.ibs.re.kr
or contact the PCS Visitor Program at pcs@ibs.re.kr

Invited Speakers

Alberto Amo (France)
Carlos Anton-Solanas (Spain)
Alexander Cerjan (USA)
Chang Hee Cho (Korea)
Suk Bum Chung (Korea)
Michael Frazer (Japan)
Su-Hyun Gong (Korea)
Sven Hofling (Germany)
Deep Jariwala (USA)
Khadga Karki (China)
Alexey Kavokin (UK)
Myung Kee Kim (Korea)
Sebastian Klembt (Germany)
Sergei Koniakhin (Korea)
Fabrice Laussy (UK)
Han Suk Lee (Korea)
Hyang-Tag Lim (Korea)
Yoo Sin No (Korea)
Mikhail Portnoi (UK)
Su Rui (Singapore)
Min-Kyo Seo (Korea)
Helgi Sigurdsson (Poland)
Ihor Vakulchyk (Canada)
Luis Viña (Spain)
Jian Wu (China)
Xingran Xu (China)
Alexey Yulin (Russia)

Scientific Coordinators

Yong-Hoon Cho (Korea)
Timothy Liew (Singapore)
Ivan Savenko (China)

Organizers

Gileun Lee (Korea)
Jaehee Kwon (Korea)