SKM-Symposium Semiconductor Nanophotonics: Quantum Optics and Devices (SKM-SYNP)

jointly organized by
the Semiconductor Physics Division (HL) and
the Thin Films Division (DS)

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Modern electro-optical devices will rely on the fundamental interaction between elementary excitations of light and matter. Quantum rather than classical processes will dominate their functionality. In this symposium first realizations of nanophotonic elements with intrinsic quantum properties will be introduced. Generation of quantum light, control of single electric excitations as well as enhancement of fundamental light-matter interaction will be described, and applications in future integrated quantum technology will be discussed.

Overview of Invited Talks and Sessions

(lecture room TRE Math)

Invited Talks

SKM-SYNP 1.1	Wed	14:30–15:00	TRE Ma	**Quantum Optics on Photonic Chips** — •Dirk Englund, Brendan Shields, Hongkun Park, Mikhail Lukin, Kelley Rivoire, Jelena Vuckovic, Fariba Hatami
SKM-SYNP 1.2	Wed	15:00–15:30	TRE Ma	**Two-photon Interference from Separate Quantum Dots** — Edward Flagg, Andreas Muller, Sergey Polyakov, Alexander Ling, Alan Migdall, •Glenn S. Solomon
SKM-SYNP 1.3	Wed	15:30–16:00	TRE Ma	**Coherent optoelectronic control of a single exciton qubit** — •Artur Zrenner, Steffen Michaelis de Vasconcellos, Simon Gordon, Dirk Mantei, Wadim Quiring, Mohannad Al-Hmoud, Torsten Meier, Max Bichler, Andreas D. Wieck, Dirk Reuter
SKM-SYNP 1.4	Wed	16:15–16:45	TRE Ma	**Generation of non-classical states of light with site- and potential-controlled pyramidal quantum dots** — •Eli Kapon
SKM-SYNP 1.5	Wed	16:45–17:15	TRE Ma	**Semiconductor Devices for Quantum Photonics** — •Andrew Shields, Anthony Bennett, Mark Stevenson, Cameron Salter, Raj Patel, Ian Farrer, Christine Nicoll, David Ritchie

Sessions

SKM-SYNP 1.1–1.5	Wed	14:30–17:15	TRE Ma	**Semiconductor Nanophotonics: Quantum Optics and Devices**