



MAX PLANCK LECTURE ON NON-EQUILIBRIUM QUANTUM PHENOMENA

Connecting and scaling semiconductor quantum systems

At the core of most quantum technologies, including quantum networks, quantum computers and quantum simulators, is the development of homogeneous, long lived qubits with excellent optical interfaces, and the development of high efficiency and robust optical interconnects for such qubits.

To achieve this goal, we have been studying color centers in diamond (SiV, SnV) and silicon carbide (VSi in 4H SiC), in combination with novel fabrication techniques, and relying on the powerful and fast photonics inverse design approach that we have developed. We illustrate this with a number of demonstrated devices, including efficient photon interfaces for color centers in diamond and in SiC, and spectrally reconfigurable quantum emitters.

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Hosts:
Andrea Cavalleri,
Angel Rubio

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Zoom Lecture*



<https://www.mpsd.mpg.de/neqp-lecture#vuckovic>