

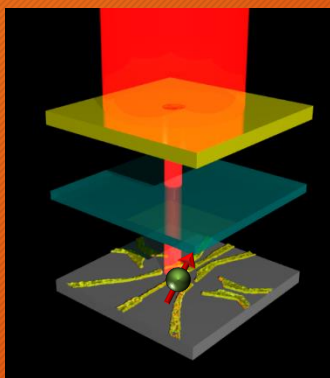
Quantum system electronics

[Division of Information and Quantum Sciences,
The institute of Industrial and Scientific Research]

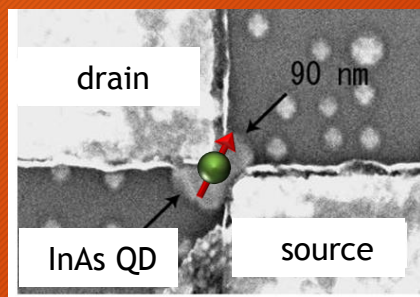
Research Overview

Quantum system electronics group studies quantum information processing using the quantum mechanical nature of electron spins and photons, and spintronics based on the development and hybridization of optical, electrical and spin materials. We investigate the growth and characterization of high quality materials and perform precise quantum transport measurements. Aim of our research is the realization of novel phenomena emerging in quantum nano-structures that can control the photon, electron and spin degrees of freedom.

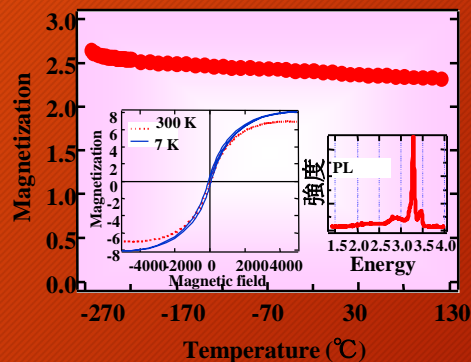
Photon-spin quantum interface



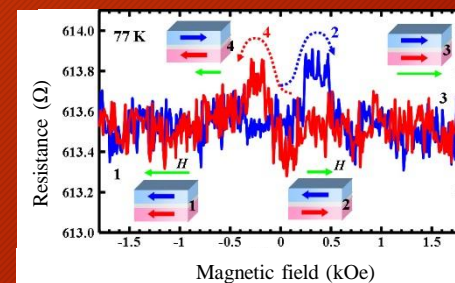
Single spin manipulation and spin qubits



GaN doped with transition metals : GaCrN



Tunnel magnetoresistance devices



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