GRK 2905 Ultrafast Nanoscopy

Seminar

Thursday, June 18, 2026
14:00 h
RUN 0.34

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Engineering excitons in 2D lateral heterostructures for reconfigurable devices

Two-dimensional semiconductor lateral heterostructures (LHS) provide atomically sharp 1D interfaces for controlling charge carriers, excitons, and light. I will present scalable growth of seamless TMD LHS, exhibiting tunable p^n junctions, electroluminescence, excitonic transistor operation, and reversible photoconductivity. These materials offer a versatile platform for quantum photonics, exciton-based devices, and low-dimensional quantum systems.

Host: Dr. Markus Huber