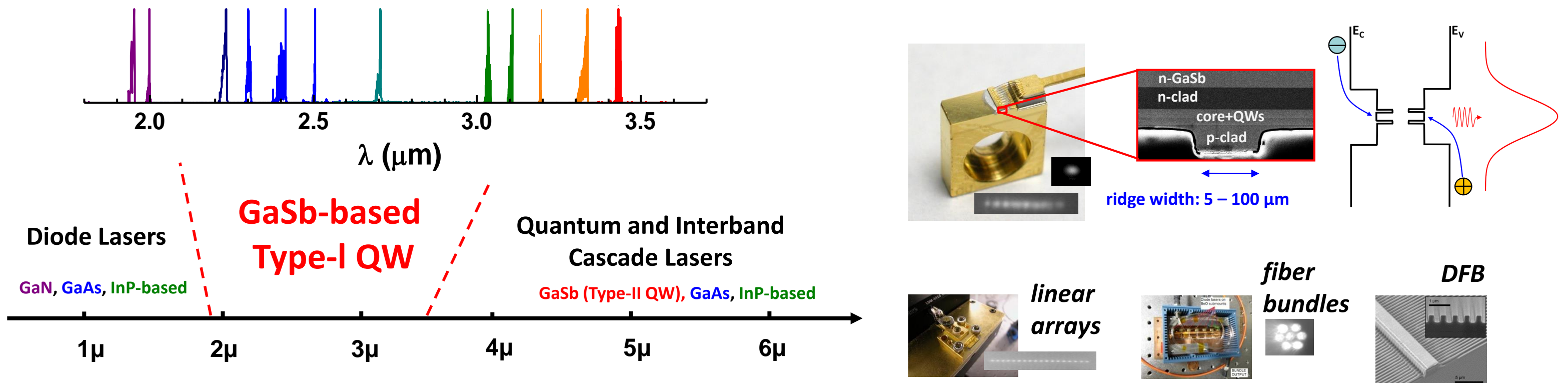
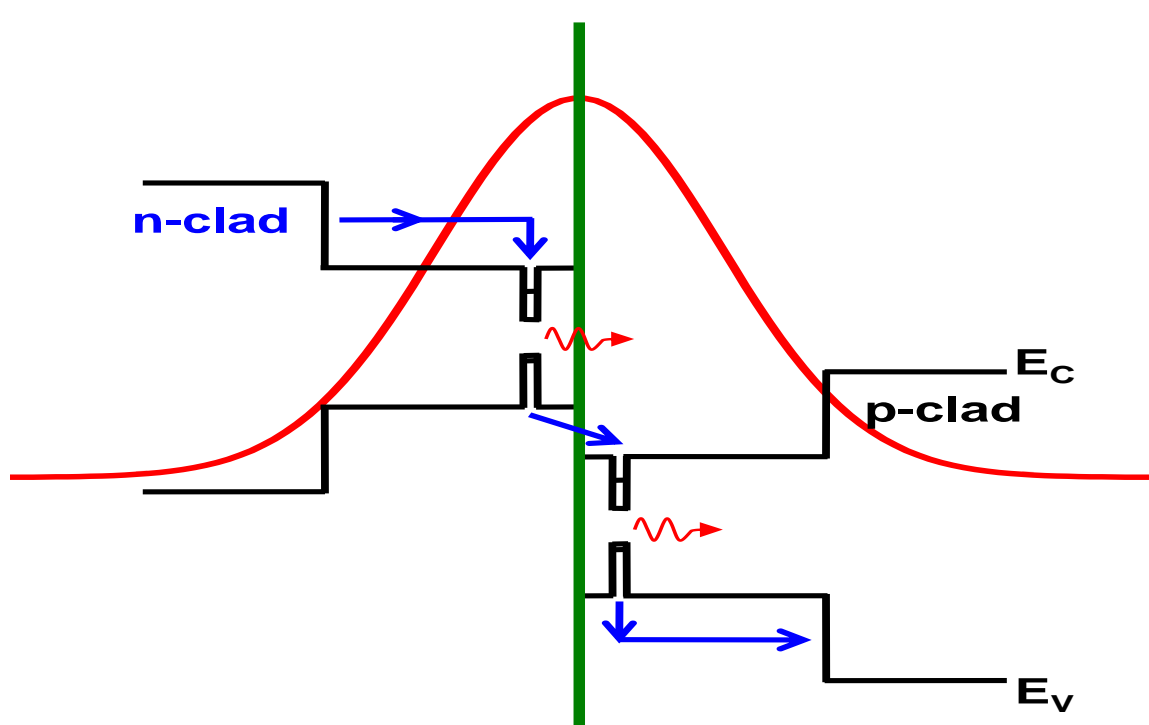


# GaSb-based type-I QW diode lasers

*GaSb-based lasers designed and developed at Stony Brook University demonstrate world record power and efficiency levels.*



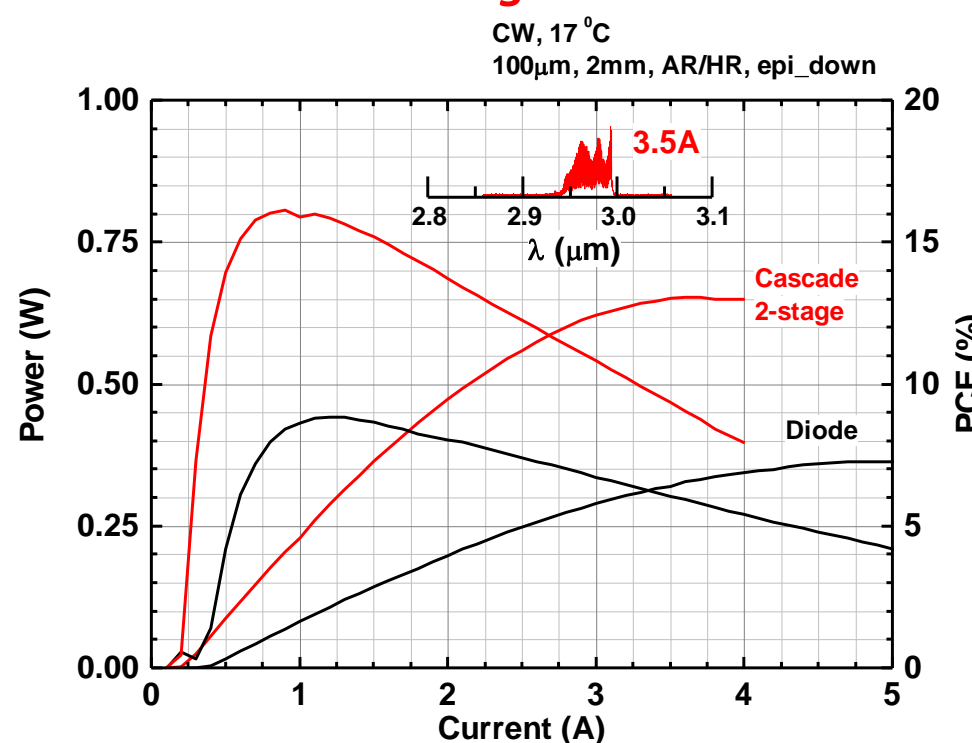
*Applications range from solid state and fiber laser pumping and seeding to hydroxyl radicals and methane spectroscopy for industrial monitoring and planetary research.*



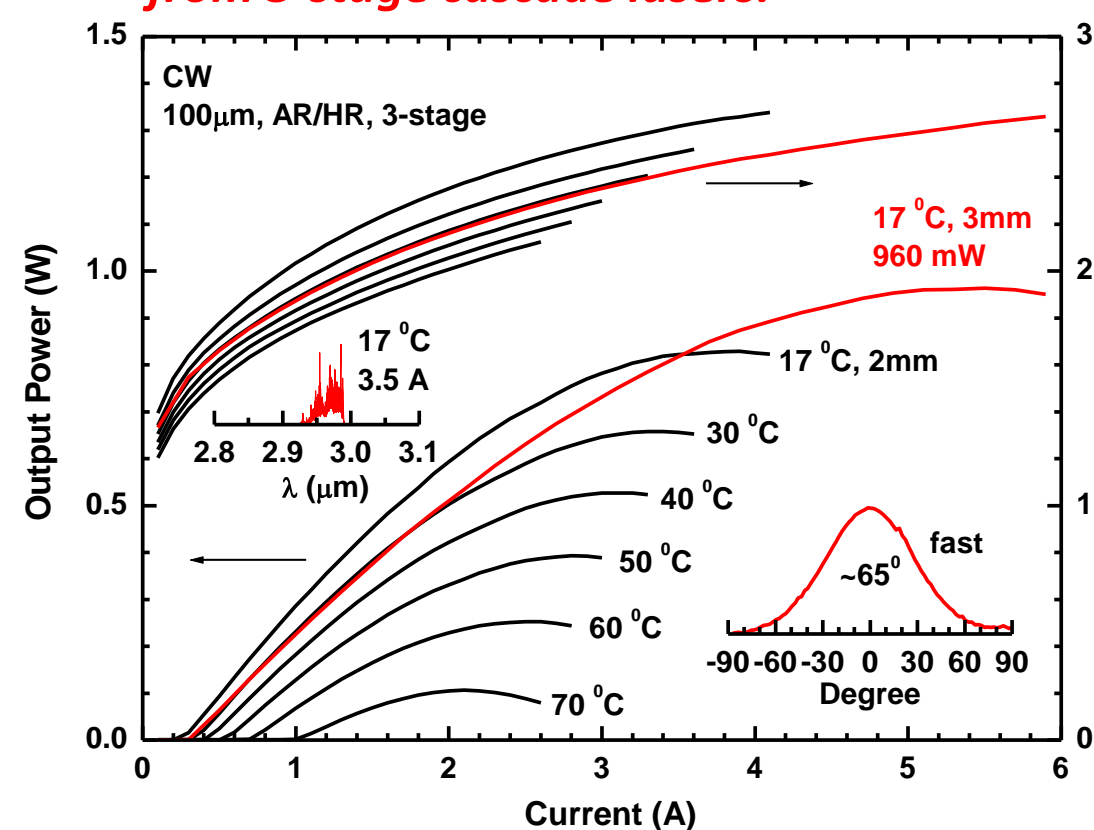
*Cascade pumping of type-I QWs enabled new class of mid-IR diode lasers with dramatically improved performance parameters.*

*Achieved watt level operation of the diode lasers previously thought to be fundamentally limited.*

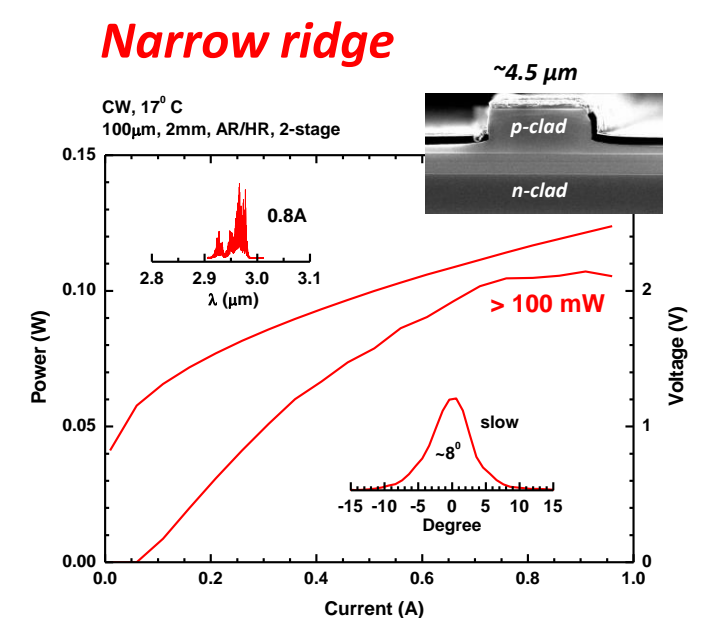
*Threshold current halved and efficiency doubled in 2-stage cascade lasers.*



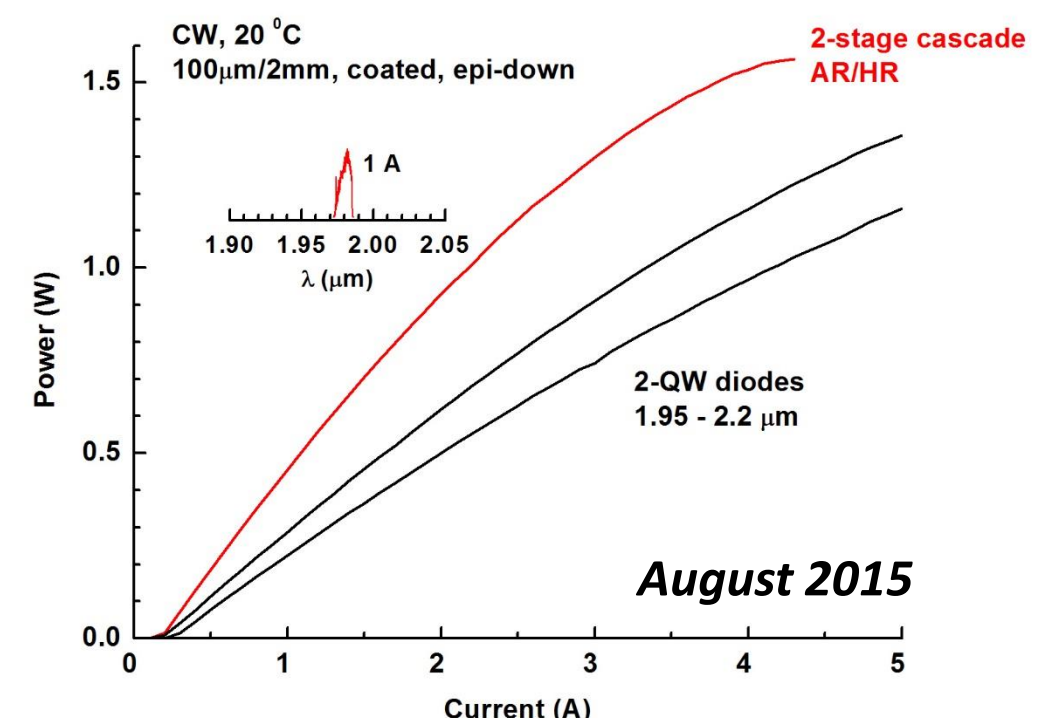
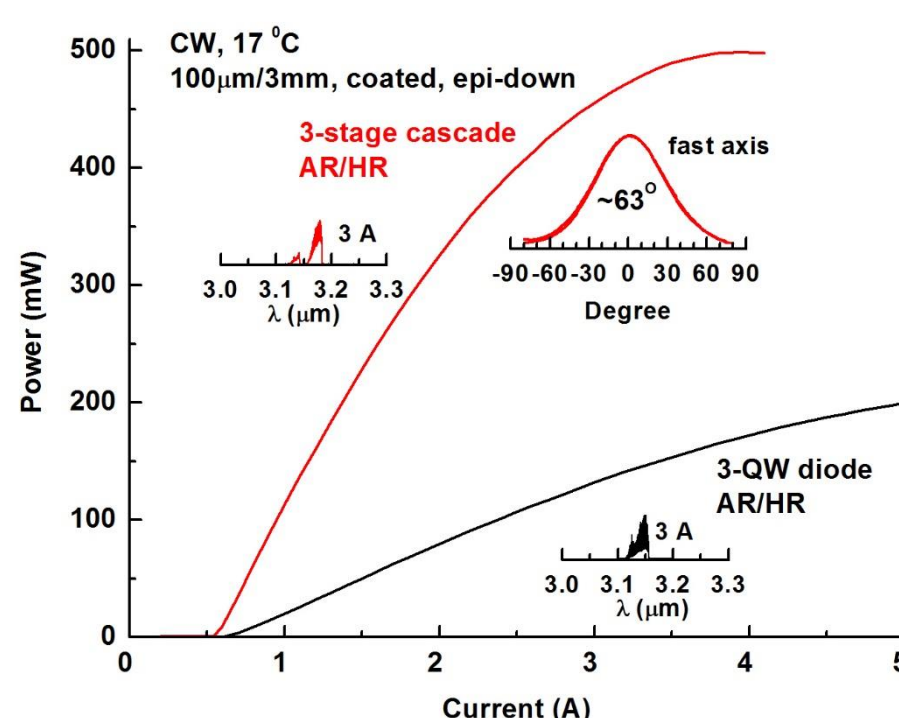
*Record ~ 1 W of output power near 3 micrometers from 3-stage cascade lasers.*



*Record >100 mW of output power in nearly diffraction limited beam.*



*NSF and DOD sponsored programs concentrate on development of these novel high power 1.9 – 3.5 micrometers cascade diode lasers.*



August 2015