



NIFly physics

Optically Pumped Silicon Lasers in the Near-Infrared

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“Four years ago, UCLA’s Bahram Jalali took a different tack to coax light from silicon by using its nonlinear Raman gain coefficient.”

“In October 2004, shortly after building a Raman amplifier, Jalali and his postdoc Ozdal Boyraz yoked the amplifier to a cavity resonator and first demonstrated a silicon Raman laser.”

“Moreover, Jalali envisions using a silicon laser as a broadly tunable device that extends the wavelength of light by the Stokes wavelength at each stage—eventually into two regimes where ordinary semiconductor laser sources cannot reach.”