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Semiconductor and Dielectric Microcavity Spectroscopy

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Abstract: Semiconductor and dielectric microcavities are used for the localization of photons as well as the enhancement of photon density of states. The enhancement of photoluminescence, electroluminescence, and lasing by the use of microcavities leads to novel active and passive optoelectronic and photonic devices such as channel dropping filters, semiconductor lasers, and resonant cavity enhanced devices. Experimental results showing photoluminescence enhancement in active planar, lasing in active ellipsoidal microcavities as well as light scattering in passive and spherical microcavities are presented.

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