We present a detailed analysis of the emission of individual GaAs/AlGaAs concentric quantum rings. Time resolved and excitation power density dependence of the photoluminescence has been used in order to determine the carrier dynamics in concentric quantum rings. Despite the small spatial separation between the two rings of the concentric quantum ring complex, the exciton dynamics in the two rings is completely decoupled.
A significant increase in the emission width and rise time, with respect to the quantum dot case, characterize the emission of the rings. We attribute such phenomenology to the exciton center-of-mass localization induced by ring height fluctuations in quantum-wire-like fashion.