

THE STRUCTURE AND PHOTOLUMINESCENCE
OF SiO₂ FILMS WITH Ge NANOCRYSTALS
OBTAINED BY PULSED LASER DEPOSITION

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S u m m a r y

We investigate the interrelation between the parameters of the laser pulse irradiation of a Si_{1-x}Ge_x target under the deposition of quantum dots (QDs), their structure, and the time-resolved photoluminescence (PL) spectrum. We have obtained Ge QDs in the Ge nanocrystals/SiO₂ matrix system, whose PL spectra lie in the energy range 1.4–3.2 eV and the PL relaxation times are from 100 ns to 10 μs.