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Micro-Raman scattering by laser-modified structures with Ge/Si quantum dots

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Abstract

Structures with self-assembled Ge/Si quantum dots grown by molecular-beam epitaxy are exposed to pulsed radiation of a picosecond laser. Changes in the vibrational spectrum of nanostructures under an external action are studied by Raman spectroscopy. An analysis of the Raman spectra measured with a micron spatial resolution along the exposed region indicates a mixing of Ge and Si atoms and a change in the induced mechanical stresses in quantum dots. © Nauka/Interperiodica 2006.