

Optical and Structural Investigations of Antimonide-Exposed InAs/GaAs Quantum Dots in an InGaAs Quantum Well Matrix for 1380 nm Photoluminescent Emission

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Photoluminescence spectra:

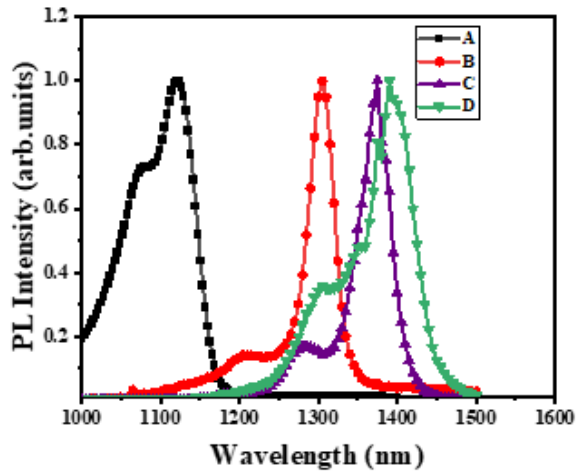


Fig.1. Normalized photoluminescence spectrum at room temperature for Sample A (InAs/GaAs QDs), Sample B (InAs QDs in an InGaAs matrix), Sample C (15-sec Sb-exposed InAs QDs in an InGaAs matrix), and Sample D (25-sec Sb-exposed InAs QDs in an InGaAs matrix).

Structural Analysis:

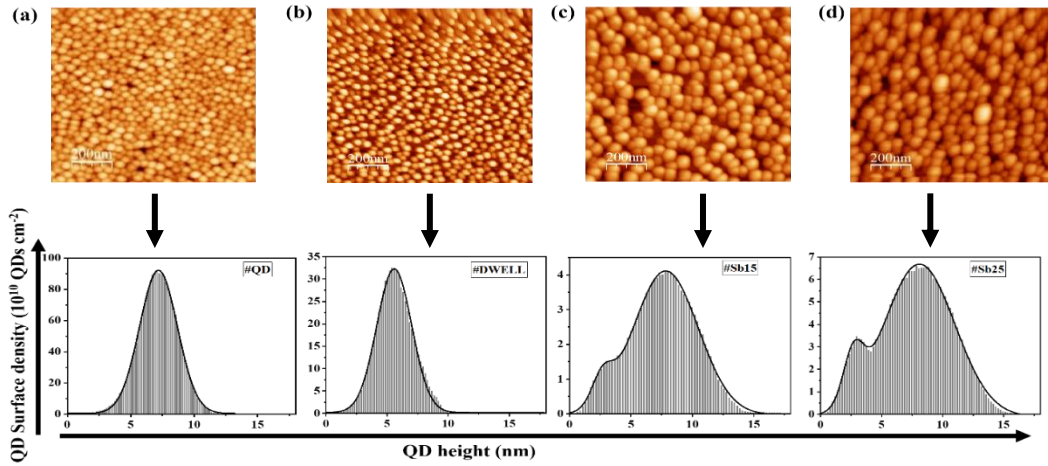


Fig.2. $1 \times 1 \mu\text{m}^2$ AFM images of InAs QDs and their respective size distribution histograms, where bars indicate experimental data, and the solid line represents the fitted curve for (a) Sample A, (b) Sample B, (c) Sample C, and (d) Sample D