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Effects of silicon atoms on InAs quantum dot density grown on GaAs buffer layer.

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We have studied the effects of silicon atoms on InAs quantum dot density grown on GaAs buffer layer grown by molecular beam epitaxy (MBE). When Silicon and Arsenic are supplied, the dot size shows smaller and more homogeneous dots compared with the arsenic supplied sample. The average lateral dot size is measured to be around 35 nm and the height is around 5 nm. The QDs density is 6.2×10^{10} cm^{-2}, which is higher than that of supplying Arsenic.

Keywords : molecular beam epitaxy(MBE), InAs QD, atomic force microscopy(AFM), Silicon

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