

Abstract Submitted
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Synthesis and Characterization of Transitional Metal Nanosystems in Semiconductor MANGAL DHOUBHADEL, BIBHU ROUT, VENKATA KUMMARI, JEROM DUGGAN, TILO REINERT, FLOYD MCDANIEL, University of North Texas — Low energy (less than 80 keV) transition metal ions (Ag, Cu) were implanted into Si(100) to create buried metal-silicon layers. The physical structure of the defects due to the various ion energies and fluencies has been studied. The evolution of defects clusters in the Si due to the implanted ion as well as the morphology of formed nanostructures was observed for various annealing parameters. The annealing temperature (~ 500 °C) was kept moderately low to study the diffusion of the implanted metal ions. The samples were characterized using Rutherford Back Scattering Spectrometry (RBS), Ion Channeling (RBS/C), Raman Spectroscopy and Transmission Electron Microscopy (TEM).

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