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Formation and Growth of Cu Nanocrystalite in Si(100) by Ion Implantation

H. K. Kim, S. H. Kim and D. W. Moon

*Surface Analysis Group,
Korea Research Institute of Standards and Science*

In order to produce Cu nanocrystallite in silicon wafer, the implantation technique was used. The samples of silicon (100) wafers were implanted by Cu⁺ ions at 100 keV and with varying the doses at room temperature. Post-annealing was performed at different conditions with Ar environment. To investigate the formation of Cu crystallite with ion doses and growth process by thermal annealing, HRTEM(high resolution transmission electron microscopy) and FT-IR spectra were studied.