

Surface Morphological Evolution during Chemical Dry Etching of Crystalline Si using F radicals and NO Gas

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Abstract : In this study, textured surface morphological change during chemical dry etching of single crystalline Si wafer using F radicals and NO gas was investigated. NO gas injected into the chamber which F radicals were supplied, enhanced development of pitted and roughened surface morphology. Pitted and roughened morphology of Si developed during fast chemical dry etching led to reduction in the reflectance of visible light. The texture development provided crystalline Si solar cells with a method of surface texturing for low reflectance.