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Investigation of Amorphous Silicon A-Si Thin Films Deposited on Silicon Substrate by Raman Spectroscopy

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Abstract : Silicon has excellent physical and electrical properties for optoelectronics industry. It is a promising material with many advantages. On Raman characterization of thin films deposited on crystalline silicon substrate, the signal Raman of amorphous silicon is often disturbed by the Raman signal of the crystalline silicon substrate. In this paper, we propose to characterize thin layers of amorphous silicon deposited on crystalline silicon substrates. The results obtained have shown the possibility to bring out the Raman spectrum of deposited layers by optimizing experimental parameters.

Keywords : raman scattering, amorphous silicon, crystalline silicon, thin films
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