

p-Si detectors for alpha particles

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This paper describes a new low temperature process for growing silicon nitride on silicon substrates p-type. The experimental procedure involves surface nitridation with monatomic nitrogen produced by electrical discharge.

The possibility to produce by simple method stable and insensitive to atmospheric contamination surface barrier on p-Si opens some new perspective in the field of detector manufacturing and application.

The p-Si diodes have all the basic advantages of n-Si (Au) detectors, and, besides, reveal some new ones.