

[54] PROCESS FOR DEPOSITING A THIN-FILM LAYER OF MAGNETIC MATERIAL ONTO AN INSULATIVE DIELECTRIC LAYER OF A SEMICONDUCTOR SUBSTRATE

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[58] Field of Search 204/192 M; 427/94-96, 427/91, 99, 131; 365/171

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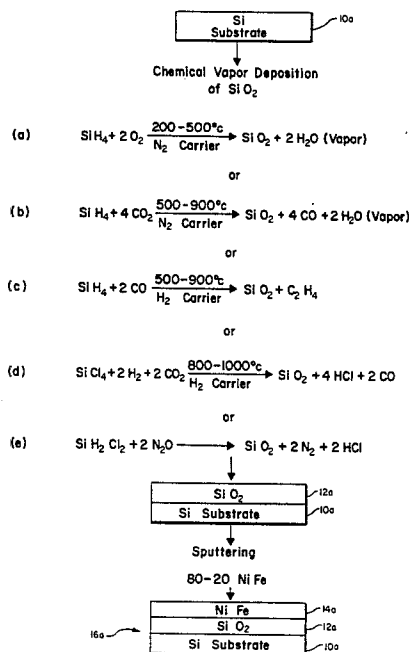
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[57] ABSTRACT

The present invention is directed to a process for depositing a thin-film layer of magnetic material onto an insulative dielectric layer of a semiconductor substrate such that the layer of magnetic material completely and permanently adheres to the insulative dielectric layer. A product within the scope of the present invention is prepared by taking a semiconductor substrate, such as a silicon wafer, and through a chemical-vapor deposition process depositing a layer of an insulative dielectric (such as the silicon dioxide or silicon nitride) on the layer, and subsequently depositing a layer of a magnetic material (such as a nickel-iron alloy or a manganese-bismuth alloy) through a sputtering process onto the insulative dielectric layer.

11 Claims, 5 Drawing Figures



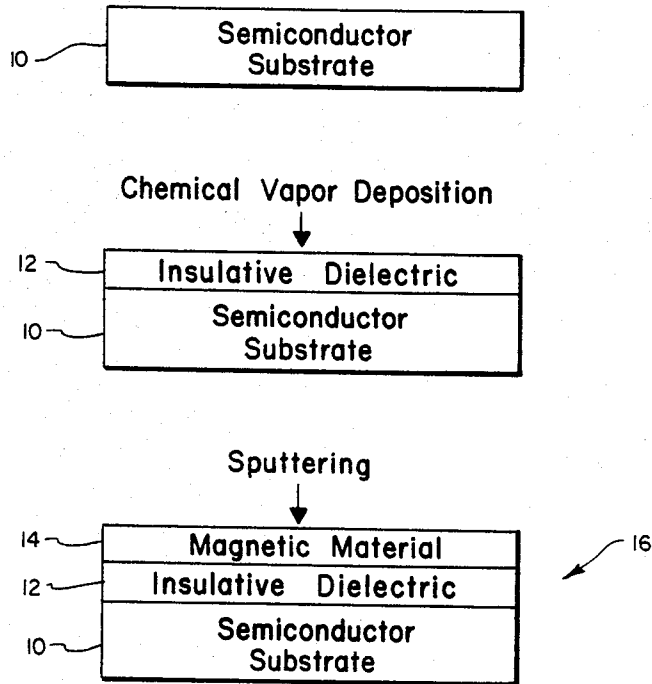


Fig. 1

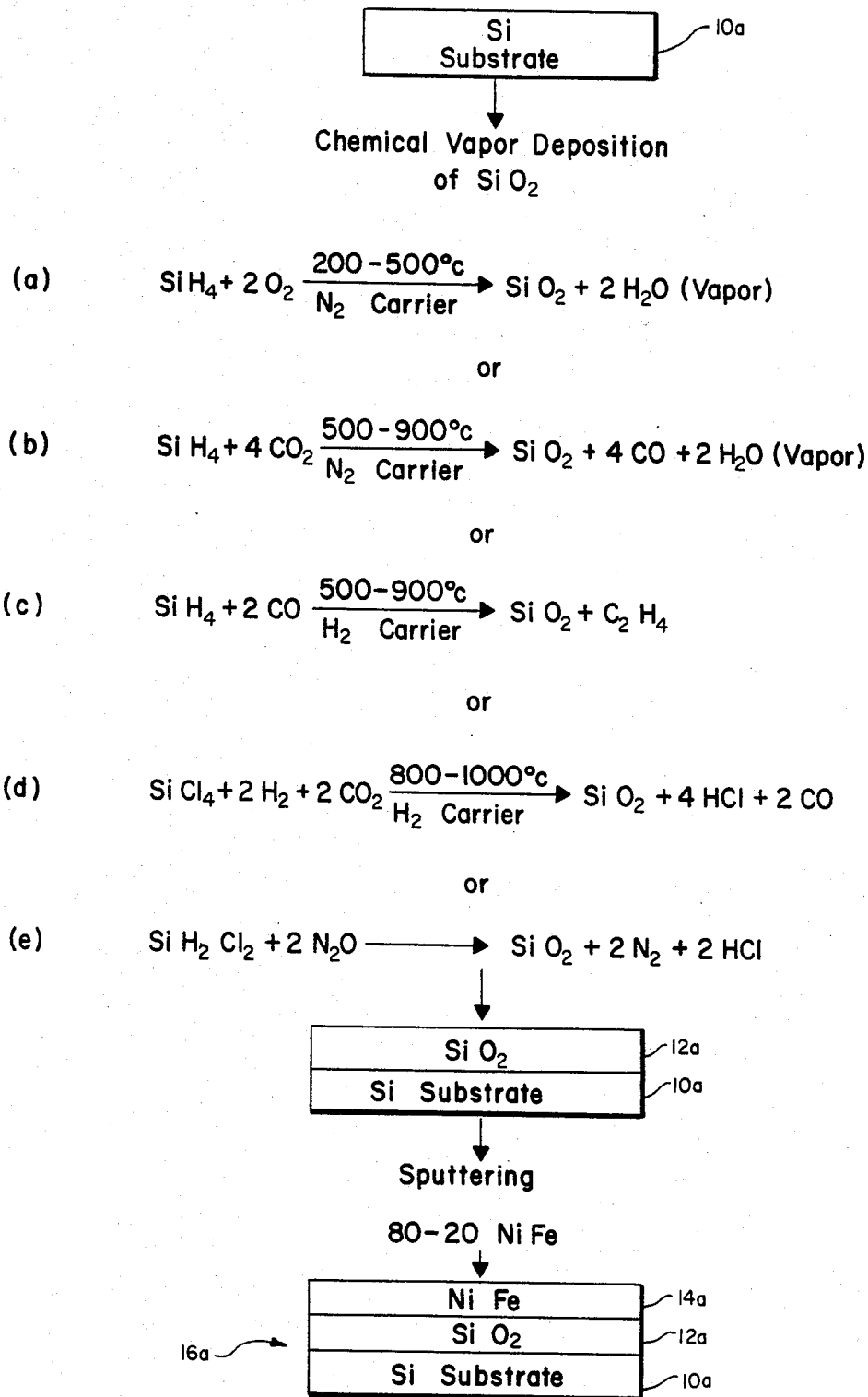


Fig. 2

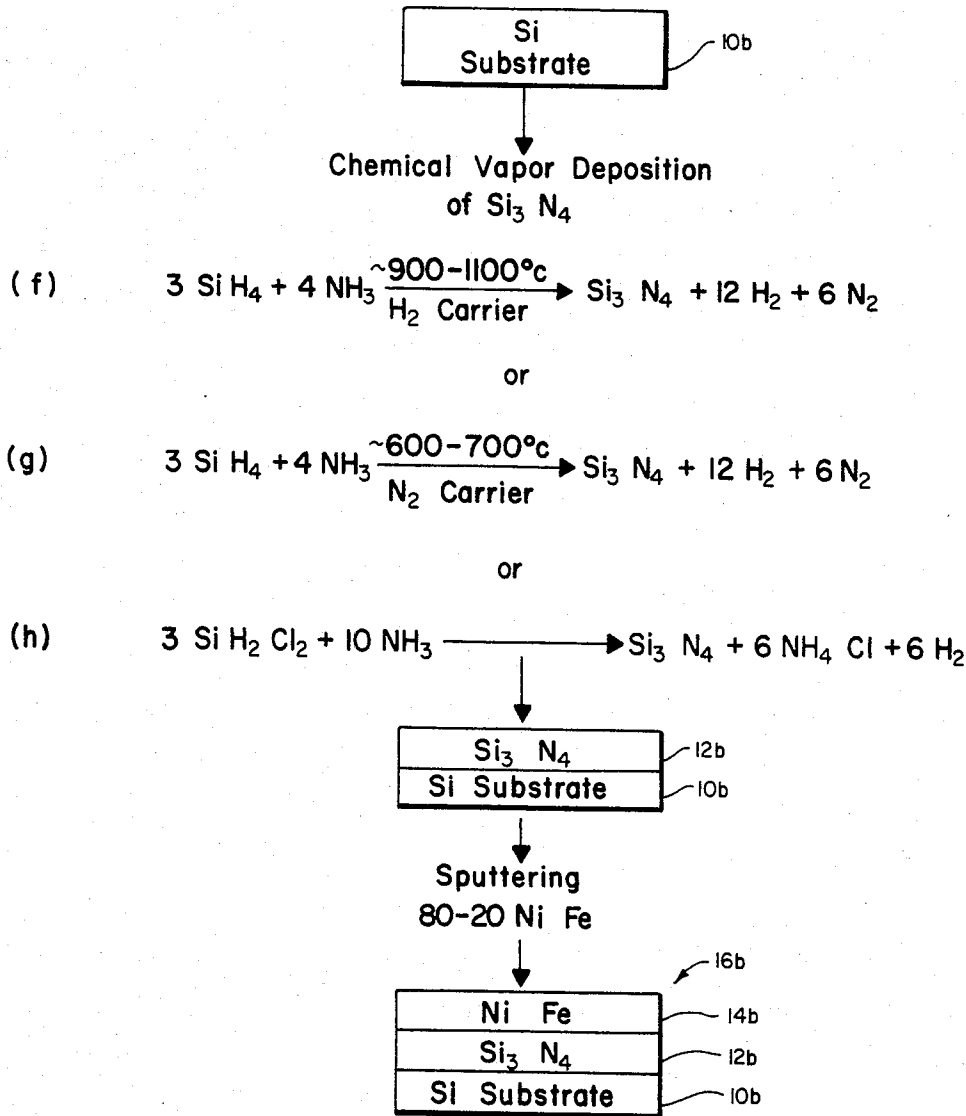


Fig. 3

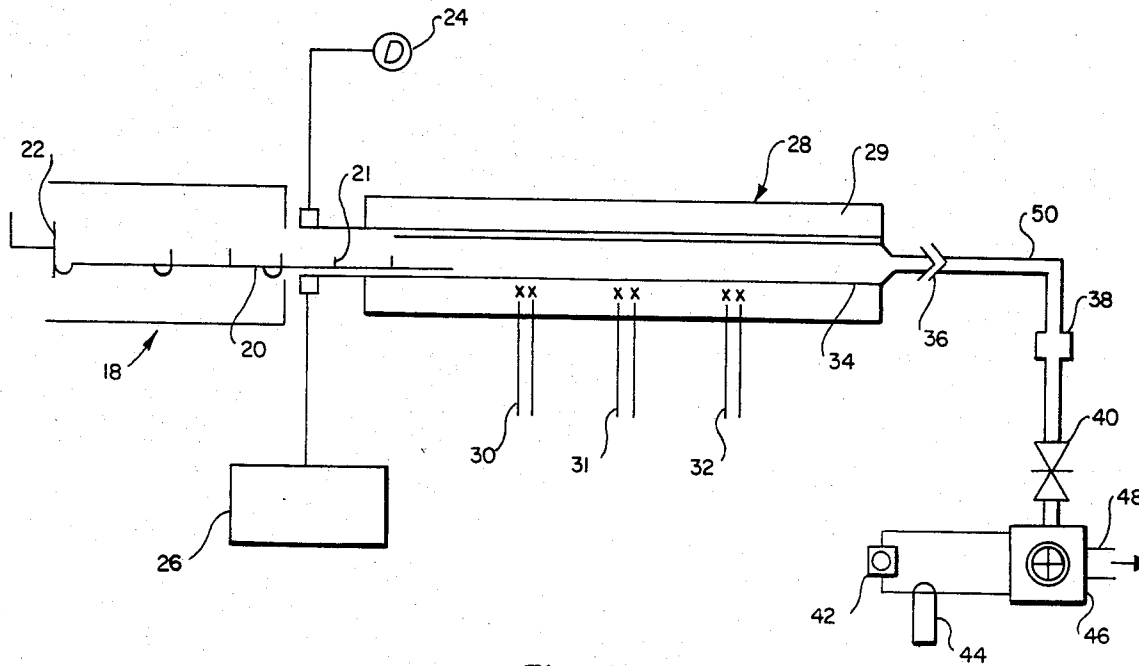


Fig. 4

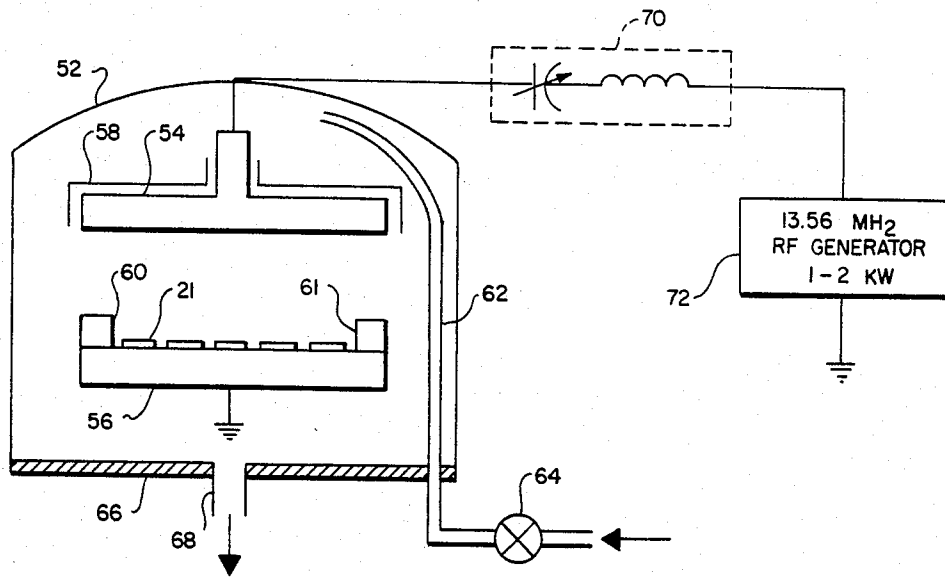


Fig. 5

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