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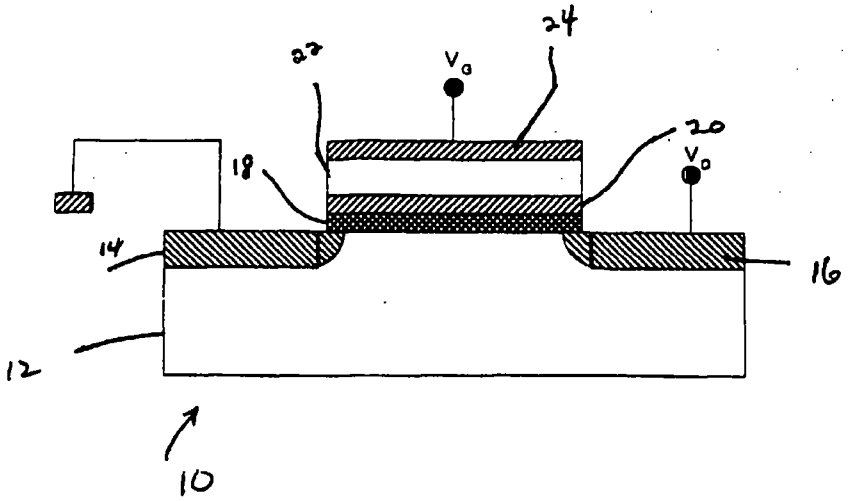
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(54) Title: FLOATING GATE MEMORY DEVICE USING COMPOSITE MOLECULAR MATERIAL



(57) Abstract: A floating gate memory device has a floating gate (20) and an insulating layer (22) on the floating gate (20). A control gate (24) is on the insulating layer (22). The insulating layer (22) is made up of a molecular matrix with ionic complexes distributed in the molecular matrix. By the application of an electric field, the ionic complexes are dissociable in the molecular matrix to change the resistivity (or conductivity) of the insulating layer (22). By switching between a high resistivity (low conductivity) state, where charge is retained by the floating gate (20), to a low resistivity (high conductivity) state, the charge stored on the floating gate (20) can readily drained off to the gate electrode (24).

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