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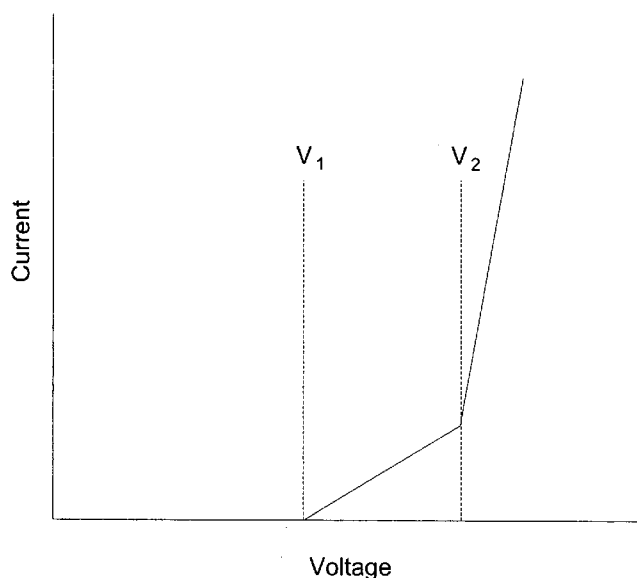
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(54) Title: FORMULATIONS FOR VOLTAGE SWITCHABLE DIELECTRIC MATERIAL HAVING A STEPPED VOLTAGE RESPONSE AND METHODS FOR MAKING THE SAME



(57) Abstract: Formulations for voltage switchable dielectric materials include two or more different types of semiconductive materials uniformly dispersed within a dielectric matrix material. The semiconductive materials are selected to have different bandgap energies in order to provide the voltage switchable dielectric material with a stepped voltage response. The semiconductive materials can comprise inorganic particles, organic particles, or an organic material that is soluble in, or miscible with, the dielectric matrix material. Formulations optionally can also include electrically conductive materials. At least one of the conductive or semiconductive materials in a formulation can comprise particles characterized by an aspect ratio of at least 3 or greater.

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