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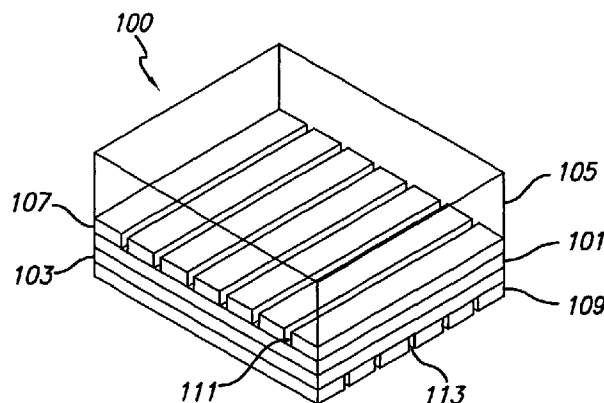
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(54) Title: ELECTRIC-FIELD ACTUATED CHROMOGENIC MATERIALS BASED ON MOLECULES WITH A ROTATING MIDDLE SEGMENT FOR APPLICATIONS IN PHOTONIC SWITCHING



(57) Abstract: A molecular system (430) is provided for electric field activated switches, such as optical switches (101, 205, 207, 209). The molecular system (430) has an electric field induced band gap change that occurs via a molecular conformation change, based on a rotor/stator construction of the molecular system, involving a rotating portion (rotor) (432) connected between two stationary portions (stators) (434). Nanometer-scale reversible optical switches (101, 205, 207, 209) are thus provided that can be assembled easily to make a variety of optical devices, including optical displays (100, 200, 300).



WO 2004/023193 A2