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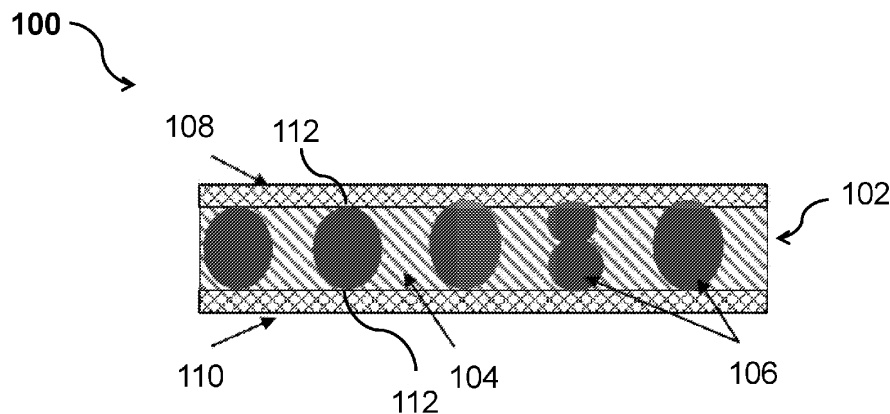


FIG. 1A

(57) Abstract: Devices and method for synchronized light and sound emission are disclosed. The device comprises: a first electrode layer; a second electrode layer; and a composite material layer disposed between the first electrode layer and the second electrode layer, the composite material layer having an electromechanical active matrix and an electroluminescent component; and wherein the electroluminescent component comprises a plurality of particle sets dispersed in the electromechanical active matrix, each particle set being continuous and having two ends each in contact with a respective one of the first and second electrode layers.

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