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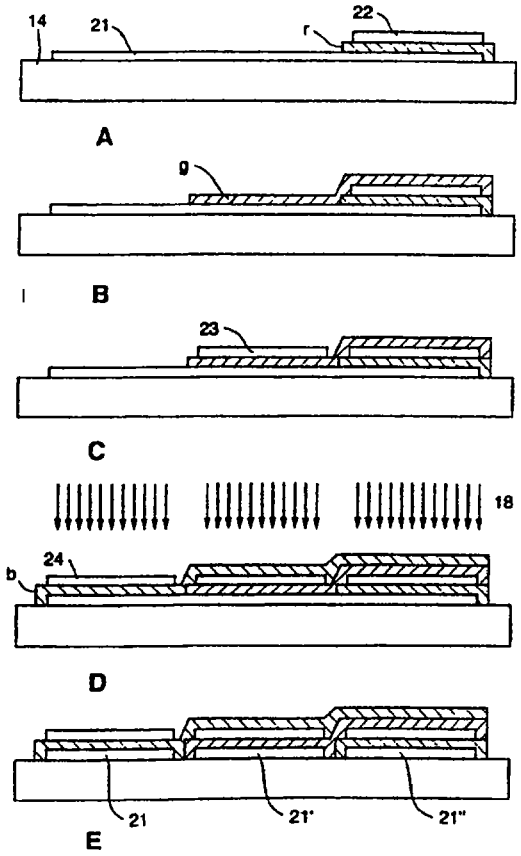
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(54) Title: IMAGE SENSORS MADE FROM ORGANIC SEMICONDUCTORS

(57) Abstract

Image sensors with monochromatic or multi-color response made from organic semiconductors are disclosed. The image sensors are comprised of image sensing elements (pixels) each of which comprises a thin layer (or multiple layers) of organic semiconductor(s) sandwiched between conductive electrodes. These image sensors can be integrated or hybridized with electronic or optical devices on the same substrate or on different substrates The electrical output signals from the image sensors resulting from the input image are probed by a circuit connected to the electrodes. The spectral response of the image sensing elements can be modified and adjusted to desired spectral profiles through material selection, through device thickness adjustment and/or through optical filtering Several approaches for achieving red, green, and blue full-color detection are disclosed. Similar approaches can be used for multiple-band detection (wavelength multiplexing) in desired response profiles and in other selected spectral ranges.



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