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Dodabalapur et al.

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[54] **ARTICLE COMPRISING AN ORGANIC THIN FILM TRANSISTOR**

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Related U.S. Application Data

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[52] **U.S. Cl.** **257/66**; 257/40; 257/289; 257/403; 257/642

[58] **Field of Search** 257/40, 289, 410, 257/347, 642, 285, 349, 404, 403

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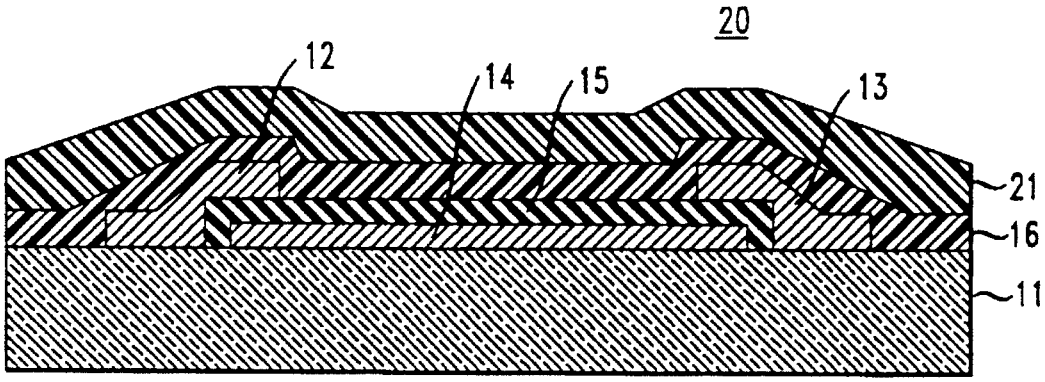
[57] **ABSTRACT**

Articles according to the invention comprise an improved organic thin film transistor (TFT) that can have substantially higher source/drain current on/off ratio than conventional organic TFTs. An exemplary TFT according to the invention comprises, in addition to a p-type first organic material layer (e.g., α-6T), an n-type second organic material layer (e.g., Alq) in contact with the first material layer. TFTs according to the invention can be advantageously used in, for instance, active liquid crystal displays and electronic memories.

15 Claims, 3 Drawing Sheets