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United States Patent [19]

Strite

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[54] **ORGANIC/INORGANIC ALLOYS USED TO IMPROVE ORGANIC ELECTROLUMINESCENT DEVICES**

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[52] **U.S. Cl.** **257/40**; 257/103; 313/504; 313/506; 428/917

[58] **Field of Search** 257/40, 103; 313/504, 313/506; 428/917

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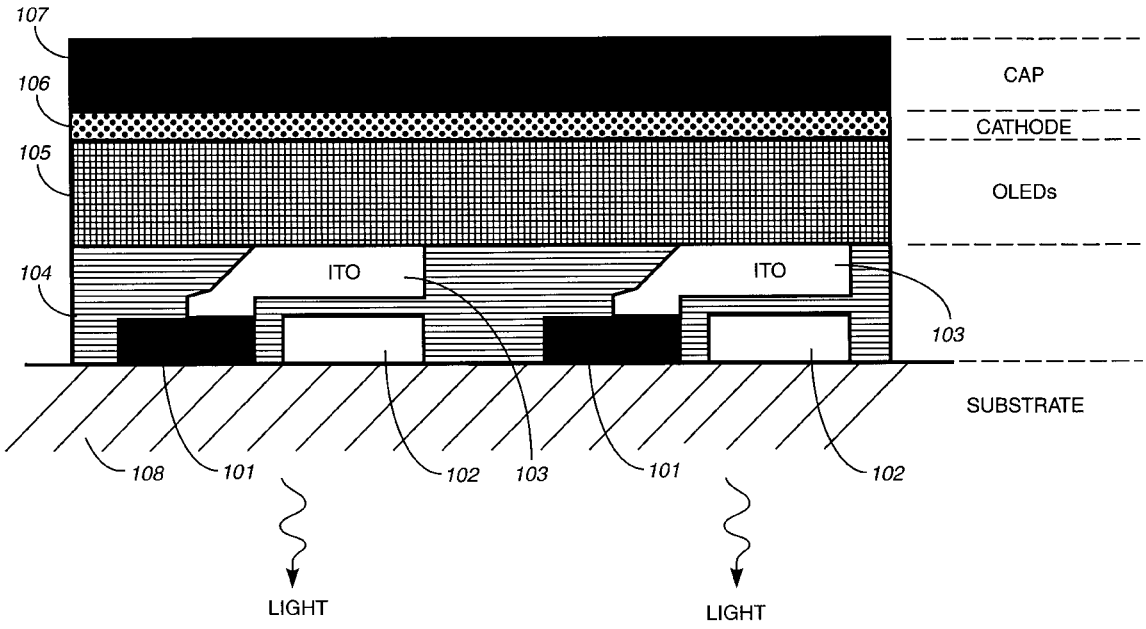
[57] **ABSTRACT**

The above objects have been accomplished by providing an OLED having an organic active **(53)** region with at least one emission layer (EL). The OLED further comprises at least one organic charge transport layer **(52)** (either a hole transport layer or an electron transport layer), an anode **(51)** and a cathode **(54)**. This organic charge transport layer **(52)** is alloyed by introduction of an inorganic component. If said alloyed charge transport layer **(52)** is a hole transport layer (HTL), for example, the holes are conducted through it by means of the inorganic constituents with reduced voltage drop or heating.

24 Claims, 13 Drawing Sheets