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(54) Title: CAPPING LAYERS FOR METAL OXYNITRIDE TFTS

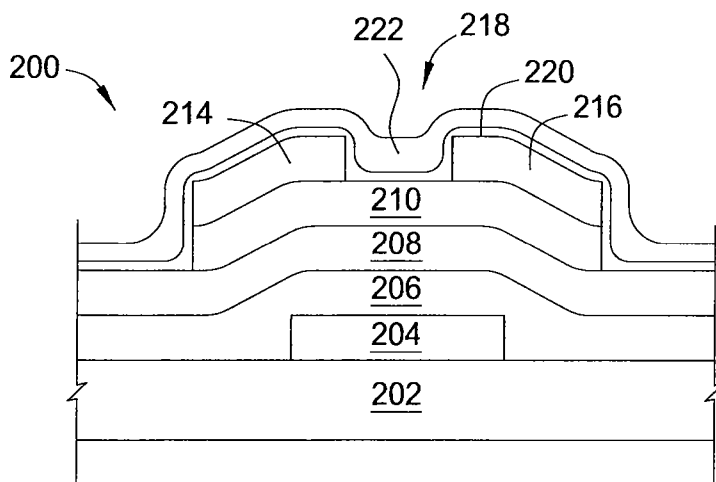


FIG. 2

(57) Abstract: A capping layer may be deposited over the active channel of a thin film transistor (TFT) in order to protect the active channel from contamination. The capping layer may affect the performance of the TFT. If the capping layer contains too much hydrogen, nitrogen, or oxygen, the threshold voltage, sub threshold slope, and mobility of the TFT may be negatively impacted. By controlling the ratio of the flow rates of the nitrogen, oxygen, and hydrogen containing gases, the performance of the TFT may be optimized. Additionally, the power density, capping layer deposition pressure, and the temperature may also be controlled to optimize the TFT performance.

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INTERNATIONAL SEARCH REPORT

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PCT/US2009/049092**A. CLASSIFICATION OF SUBJECT MATTER****H01L 29/786(2006.01)i, G02F 1/136(2006.01)i**

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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

H01L 29/786; H01L 21/84; H01L 21/336; G02F 1/1343; G02F 1/1345

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords: "TFT" and "capping" and "layer"

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5731856 A1 (KIM; DONG-GYU et al.) 24 March 1998 See the abstract; figs. 1-21; column 6, line 47 - column 12, line 40.	1-15
A	US 2006-0033106 A1 (JIN-WOOK SEO et al.) 16 February 2006 See the abstract; figs. 1-4; paragraphs [0030]-[0074].	1-15
A	JP 03958605 B2 (SAMSUNG SDI CO LTD) 18 May 2007 See the abstract; figs. 1-8; paragraphs [0029]-[0088].	1-15

 Further documents are listed in the continuation of Box C. See patent family annex.

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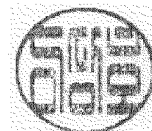
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INTERNATIONAL SEARCH REPORT

Information on patent family members

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