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(71) Applicant (for all designated States except US):

FREESCALE SEMICONDUCTOR, INC. [US/US];
6501 William Cannon Drive West, Austin, TX 78735
(US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **LIANG, Yong**
[CN/US]; 1150 W. Silver Creek, Gilbert, Arizona 85233
(US). **TRACY, Clarence J.** [US/US]; 2311 S. Butte
Avenue, Tempe, Arizona 85282 (US).

(74) Agents: **KING, Robert L.** et al.; 7700 W. Parmer Lane,
MD:PL02, Austin, Texas 78729 (US).

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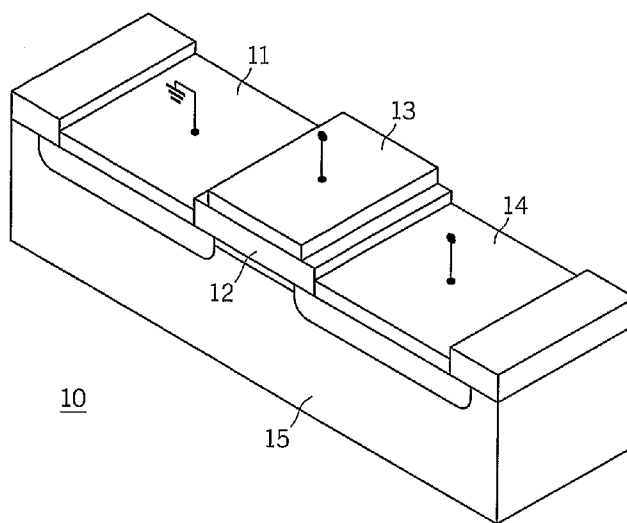
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(54) Title: CONDUCTING METAL OXIDE WITH ADDITIVE AS P-MOS DEVICE ELECTRODE



(57) Abstract: Methods for fabricating high work function p-MOS device (10) metal electrodes are provided. In one embodiment, a method is provided for producing a metal electrode (13) including the steps of: providing a high k dielectric stack (12) with an exposed surface; contacting the exposed surface of the high k dielectric stack with a vapor of a metal oxide wherein the metal oxide is selected from the group consisting of RuO_x, IrO_x, ReO_x, MoO_x, WO_x, VO_x, and PdO_x; and contacting the exposed surface of the dielectric stack (12) with a vapor of an additive selected from the group consisting of SiO₂, Al₂O₃, HfO₂, ZrO₂, MgO, SrO, BaO, Y₂O₃, La₂O₃, and TiO₂, whereby contacting the exposed surface of the dielectric stack (12) with the vapor of the metal oxide and the vapor of the additive forms an electrode (13) and wherein the additive is present at an amount between about 1 % to about 50 % by atomic weight percent in the electrode (13).

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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 U.S. : 438/685, 665, 682, 664; 257/750, 768, 296

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
 East, conduct\$4 metal oxide with dielectric metal oxide

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,193,911 B1 (Hunt et al.) 27 Feb. 2001, col 23 line 56 - col. 28 line 30	1-3, 8, 10, 13, 14
A	US 4,012,296 (Stephens et al.) 15 Mar. 1977, entire document	1-3, 8, 10, 13, 14
A	US 5,009,766 (Lauks) 23 April 1991, entire document	1 - 3, 8, 10, 13, 14
A	SU 336324 A (kryzhanovskii) 19 May 1972, Abstract	1-3, 8, 10, 13, 14

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Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Authorized officer <i>Rhonda for Bell</i> William B. Baumeister Telephone No. (703) 308-0956
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