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(71) Applicant: **NANYANG TECHNOLOGICAL UNIVERSITY** [SG/SG]; 50 Nanyang Avenue, Singapore 639798 (SG).

(72) Inventors: **DU, Yuanmin**; c/o Nanyang Technological University, 50 Nanyang Avenue, Singapore 639798 (SG). **LEW, Wen Siang**; c/o Nanyang Technological University, 50 Nanyang Avenue, Singapore 639798 (SG). **DANAN-JAYA, Putu Andhita**; c/o Nanyang Technological University, 50 Nanyang Avenue, Singapore 639798 (SG). **LAI, Weng Hong**; c/o Nanyang Technological University, 50 Nanyang Avenue, Singapore 639798 (SG).

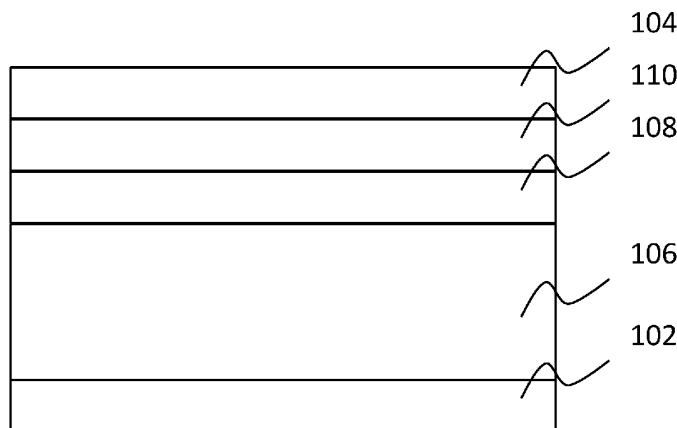
(74) Agent: **CHINA SINDA INTELLECTUAL PROPERTY PTE. LTD.**; 47 Scotts Road, #13-03 Goldbell Towers, Singapore 228233 (SG).

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(54) Title: NON-VOLATILE MEMORY DEVICE AND METHOD OF FORMING THE SAME

FIG. 1



(57) Abstract: Various embodiments may relate to a non-volatile memory device. The non-volatile memory device may include a first electrode and a second electrode. The non-volatile memory device may additionally include a switching stacked arrangement between the first electrode and the second electrode, and an oxygen scavenger layer between the switching stacked arrangement and the second electrode. The non-volatile memory device may additionally include a diffusion barrier layer between the oxygen scavenger layer and the second electrode. The switching stacked arrangement may include alternating tunneling barrier layers and active layers. A first tunneling barrier layer of the tunneling barrier layers may be in physical contact with the first electrode. A last active layer of the active layers may be in physical contact with the oxygen scavenger layer. A bandgap of each of the tunneling barrier layers may be greater than a bandgap of each of the active layers.

[Continued on next page]

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