

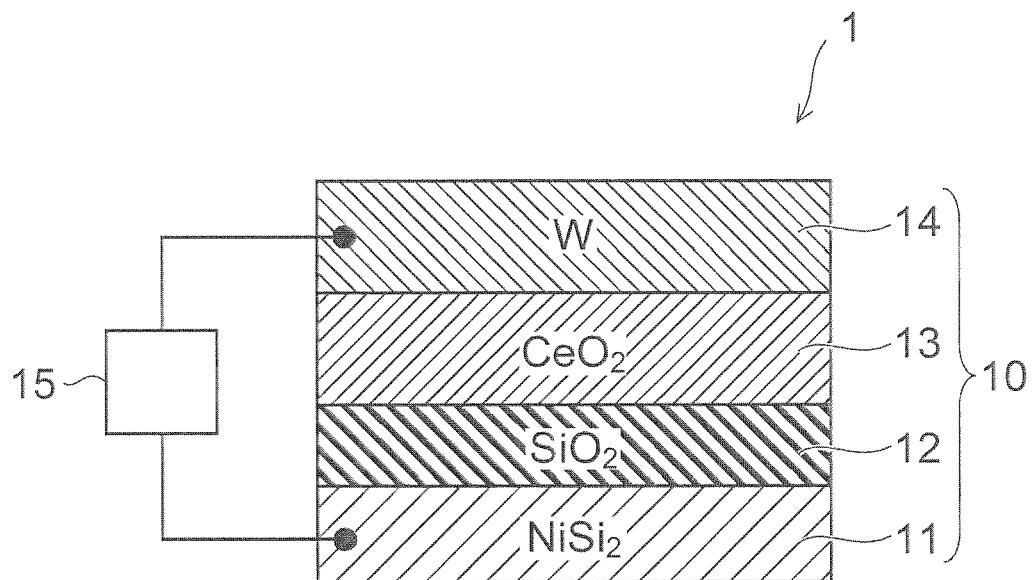


FIG. 1

FIG. 2A
LOW RESISTANCE STATE

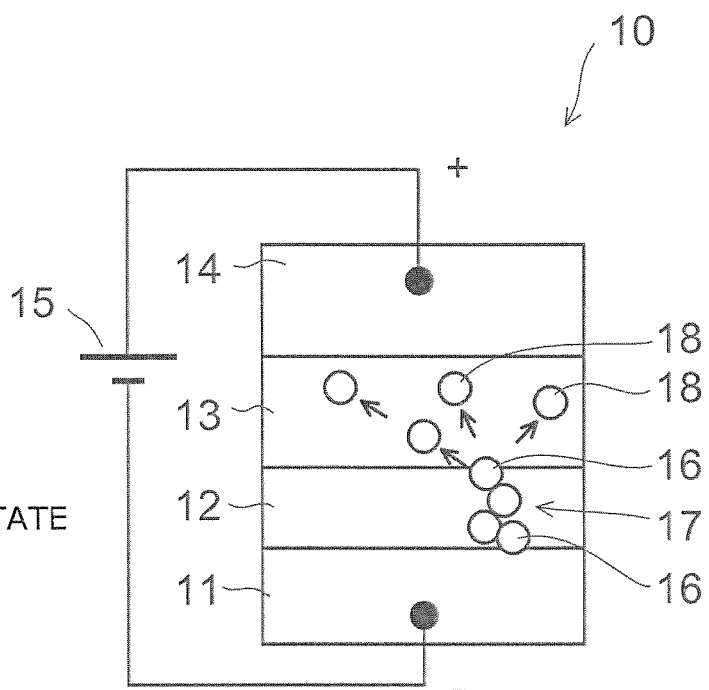


FIG. 2B
HIGH RESISTANCE STATE

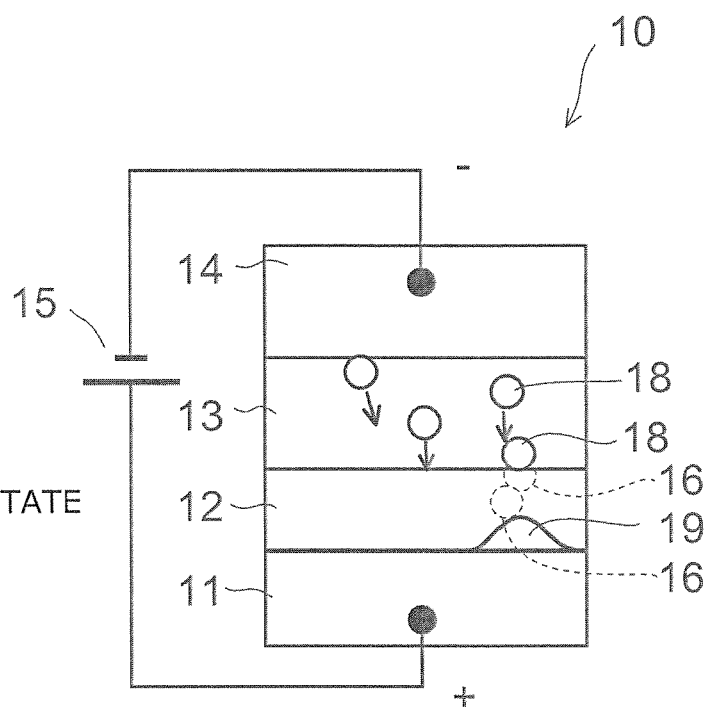


FIG. 3A
CONVENTIONAL
EXAMPLE

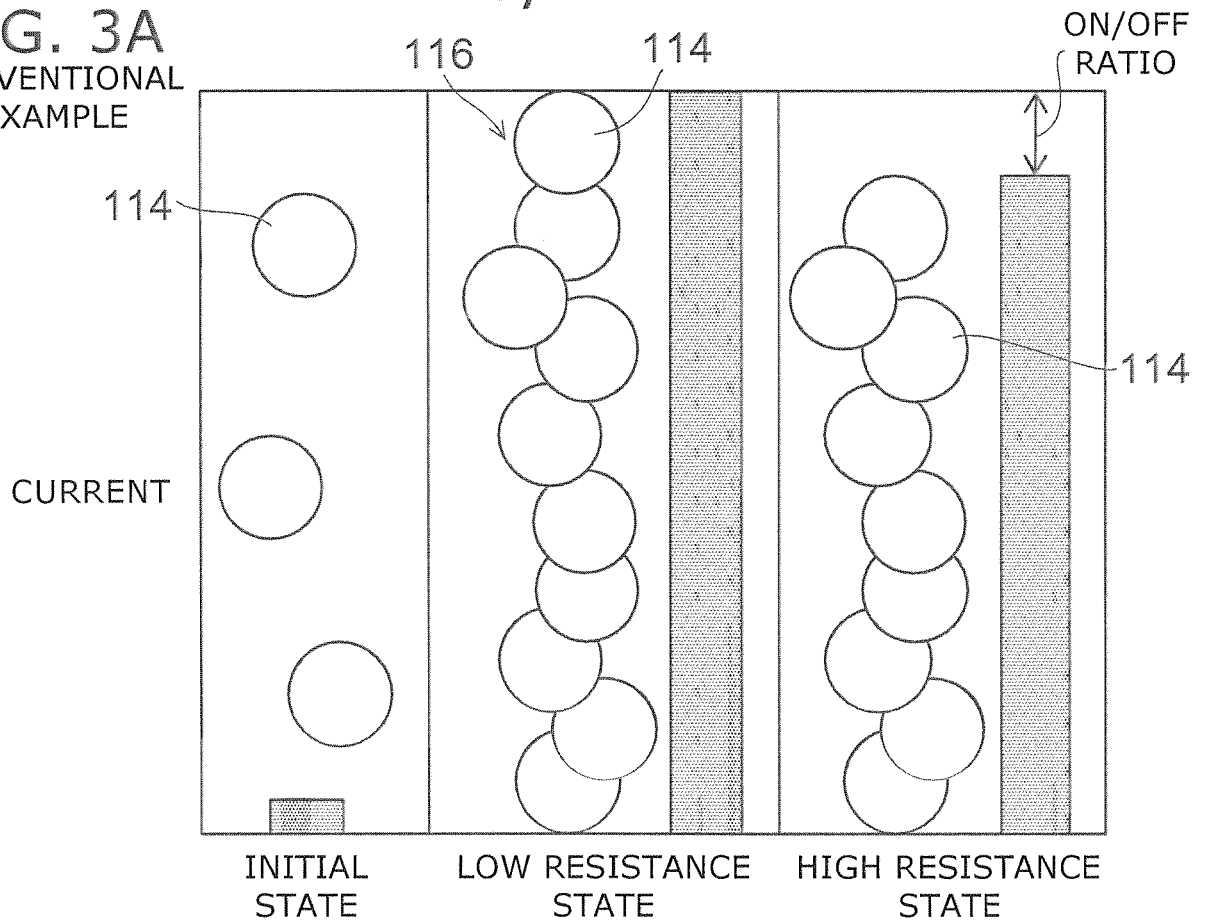
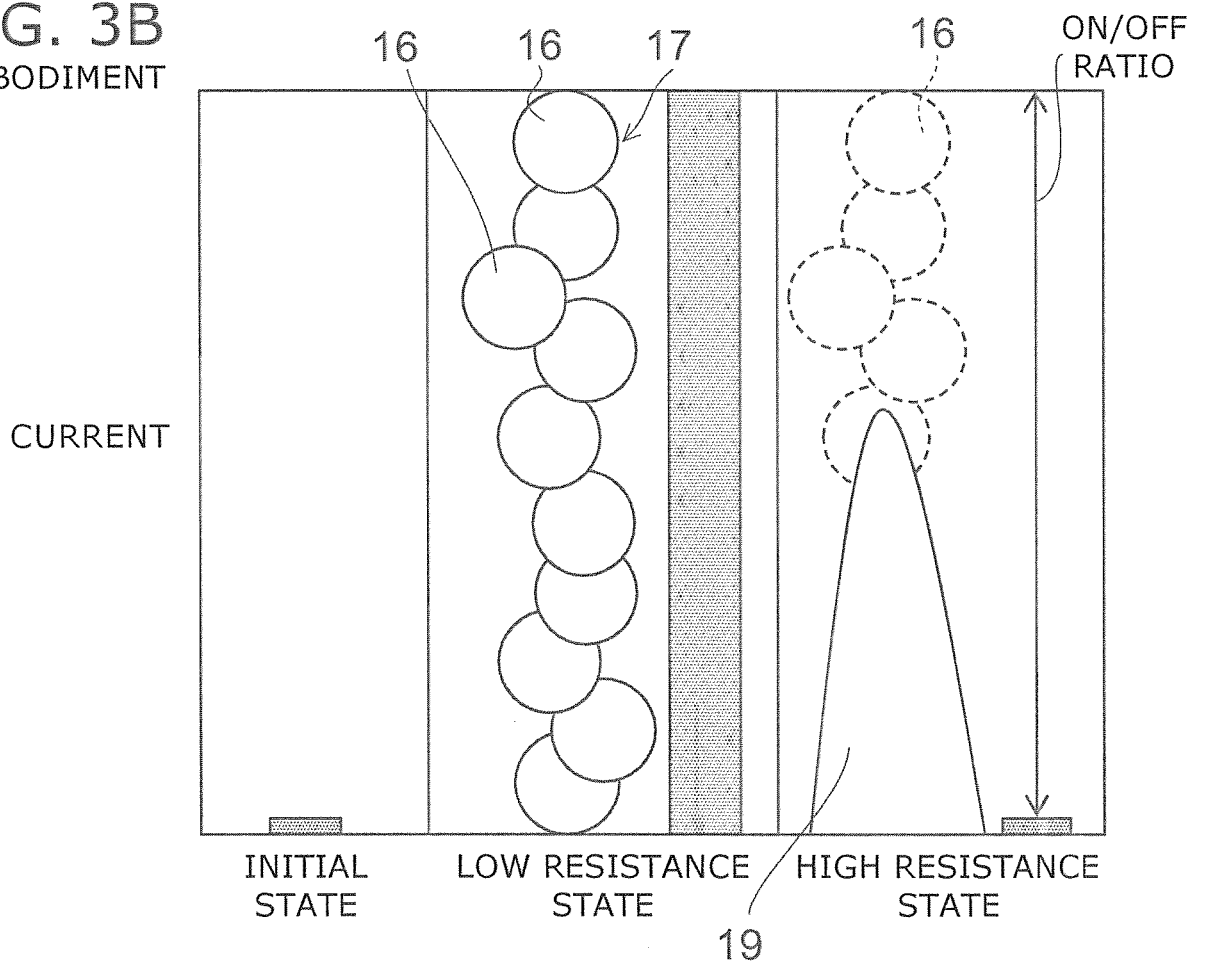


FIG. 3B
EMBODIMENT



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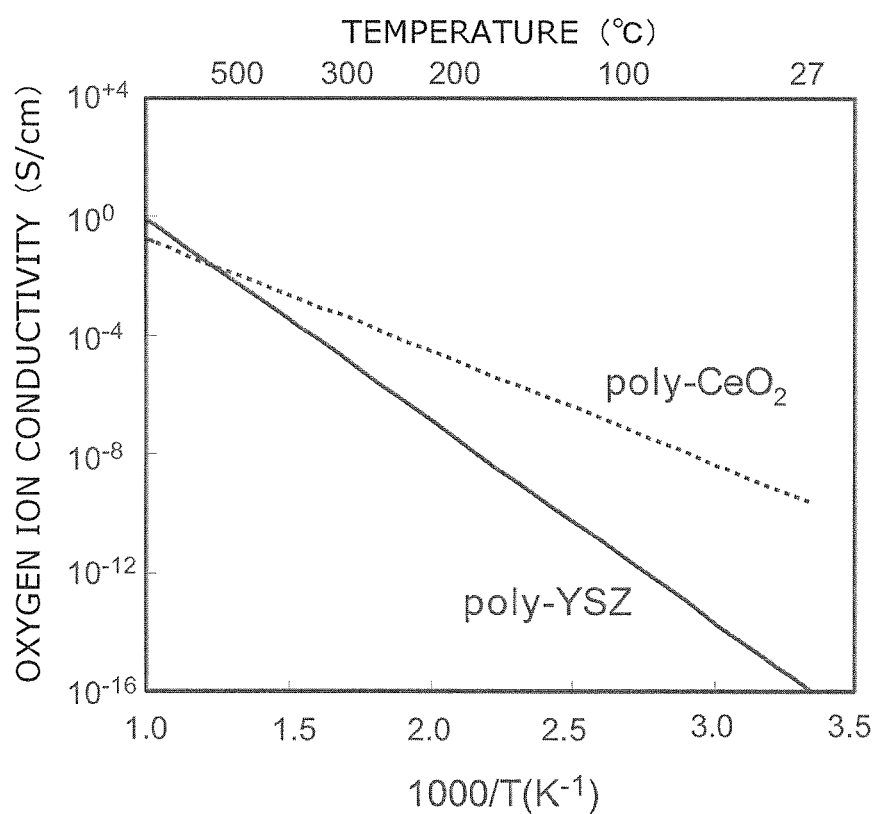


FIG. 4

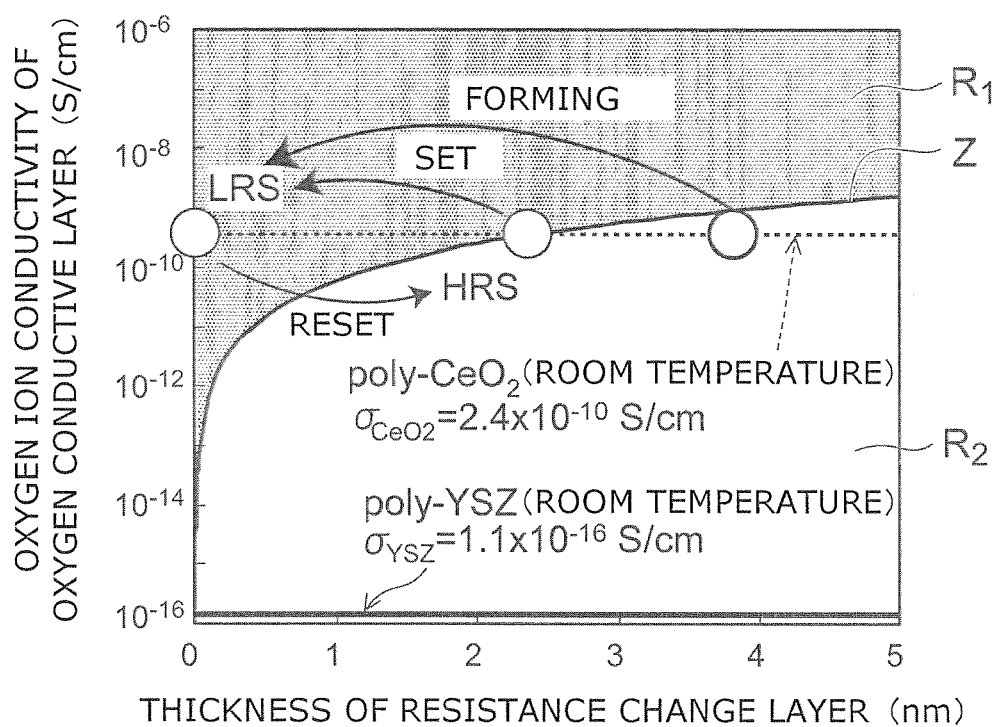


FIG. 5

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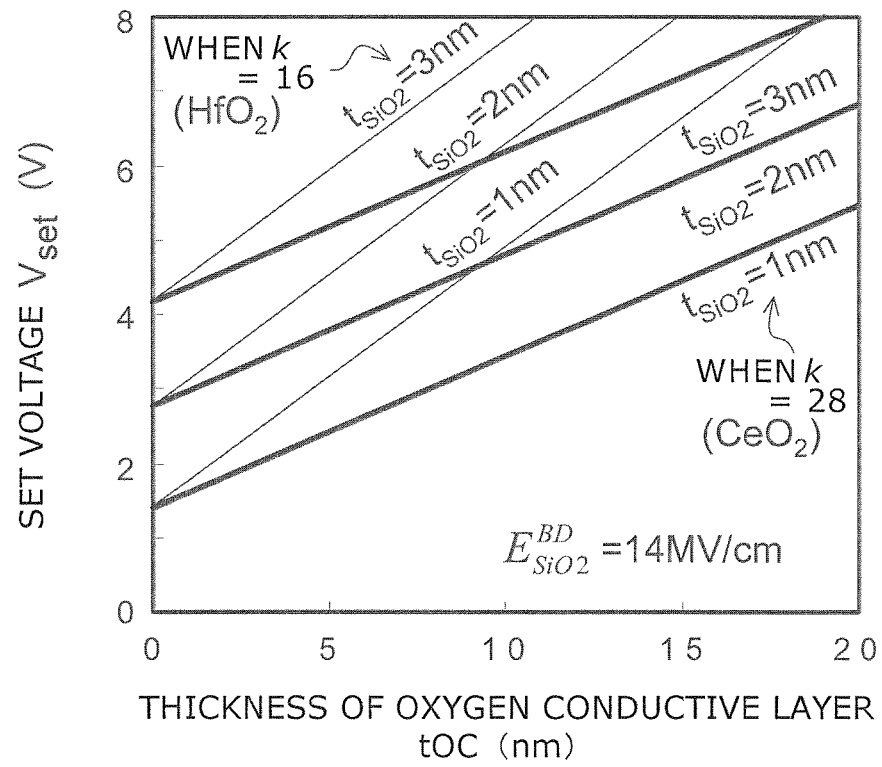


FIG. 6

FIG. 7A

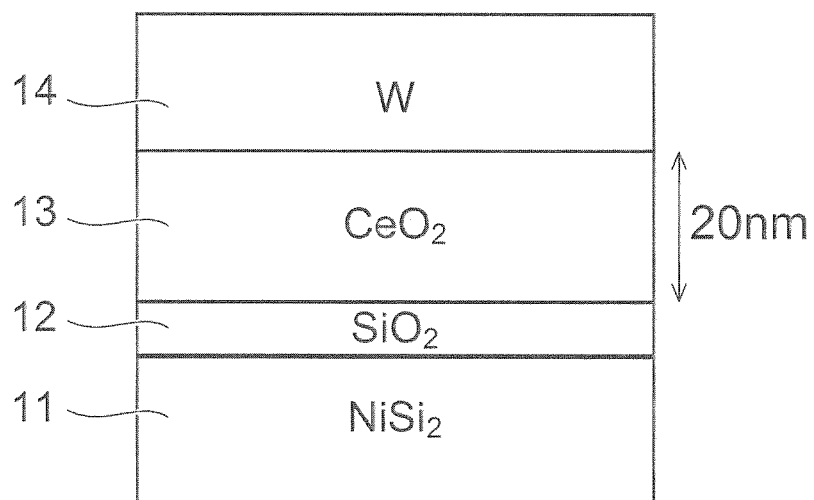


FIG. 7B

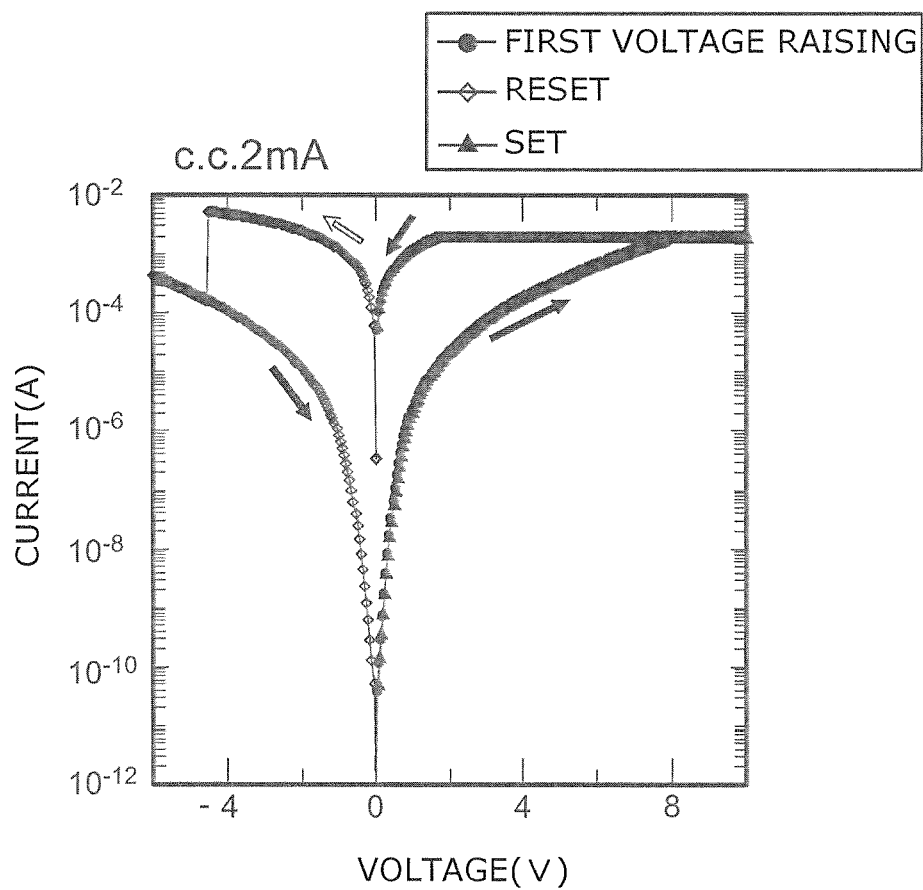


FIG. 8A

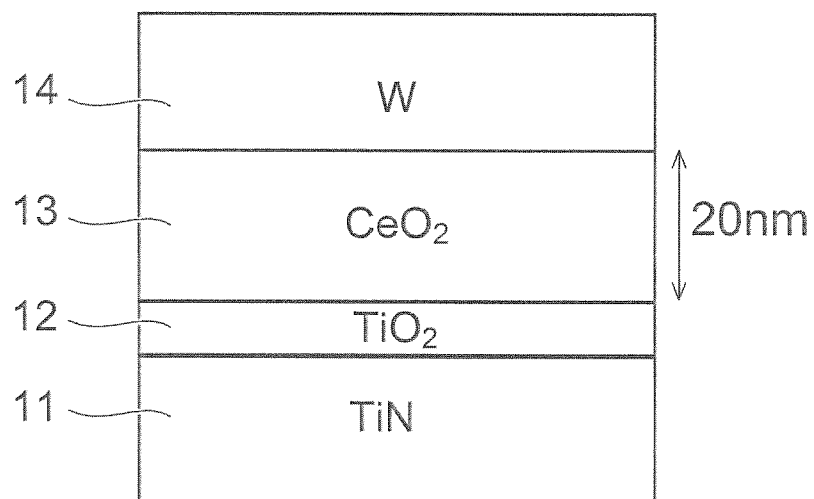


FIG. 8B

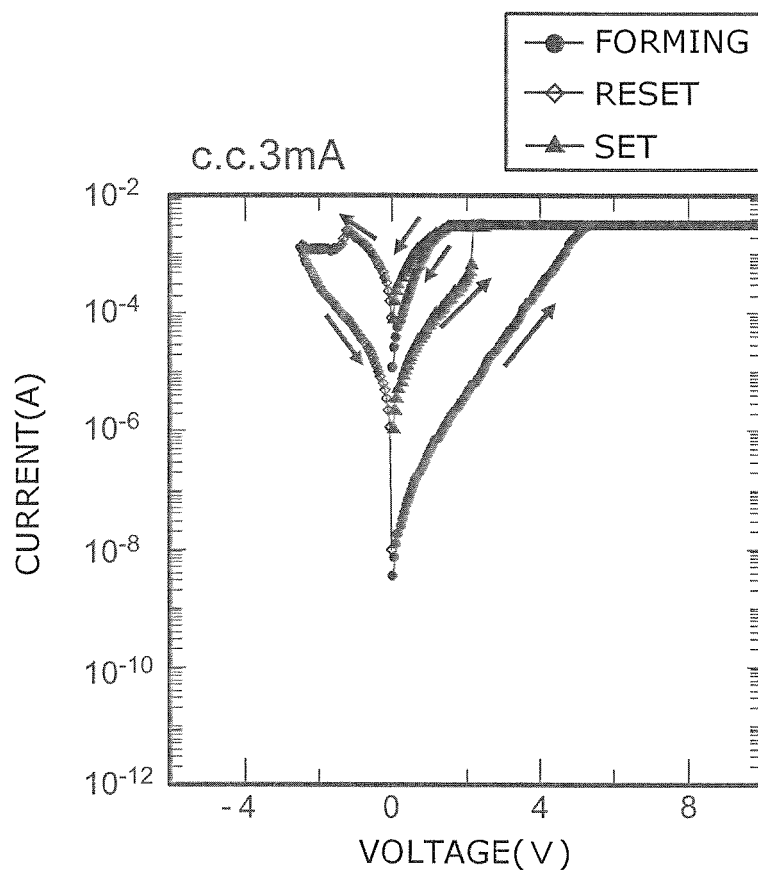


FIG. 9A
FIRST EXAMPLE

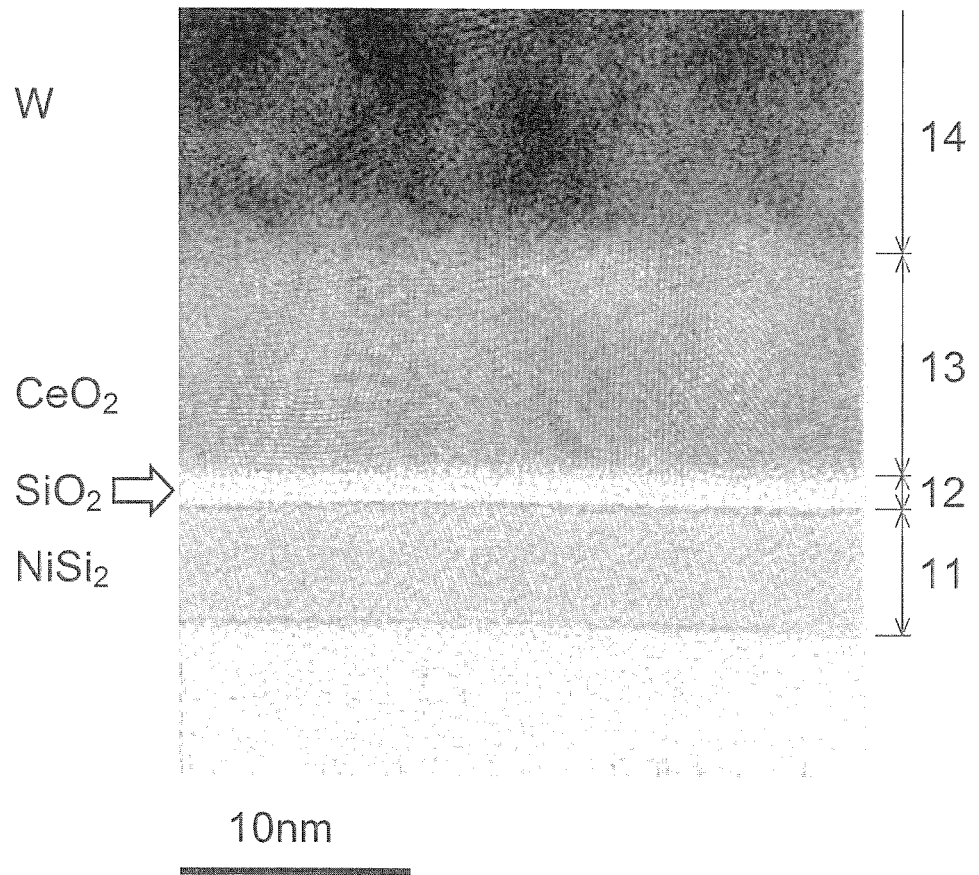


FIG. 9B
FIRST
COMPARATIVE
EXAMPLE

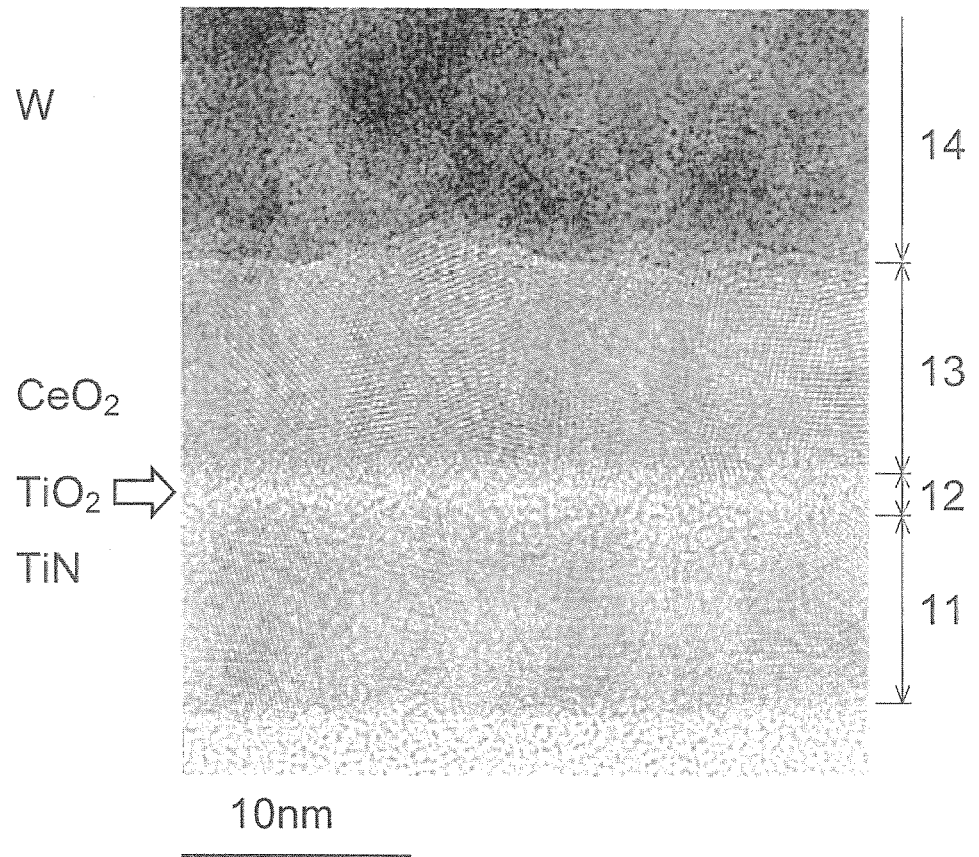


FIG. 10A

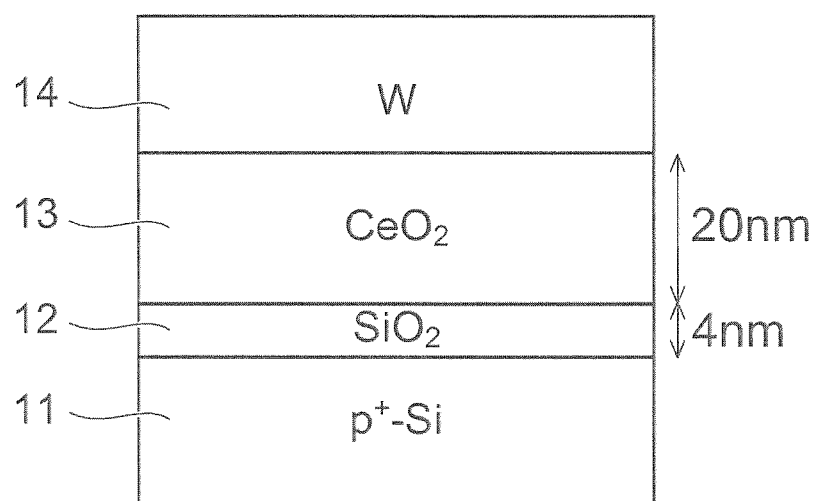


FIG. 10B

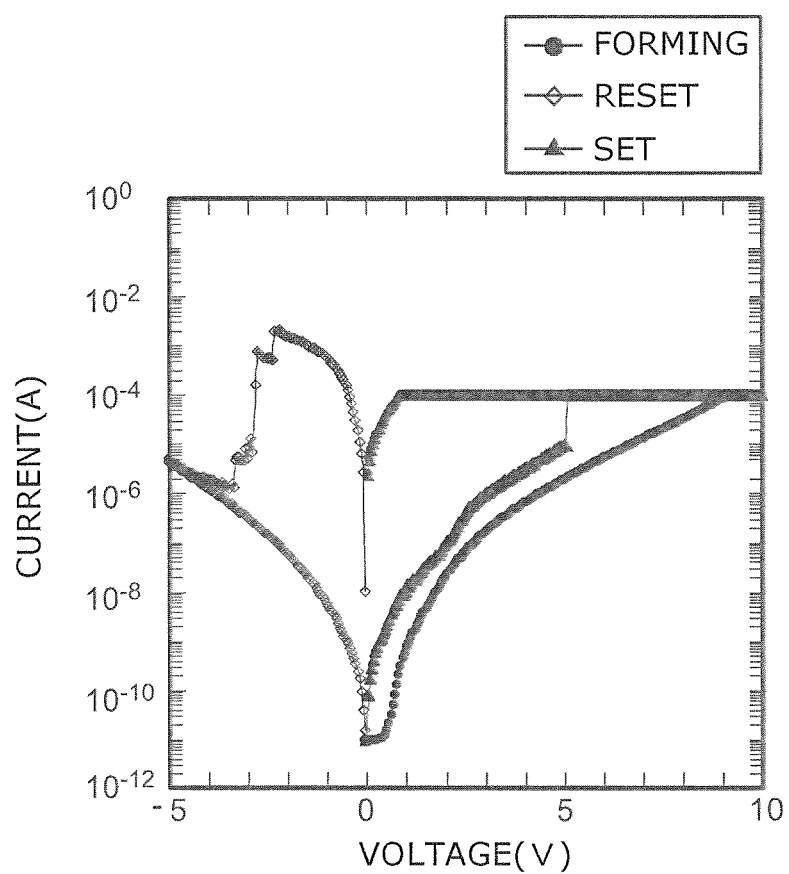


FIG. 11A

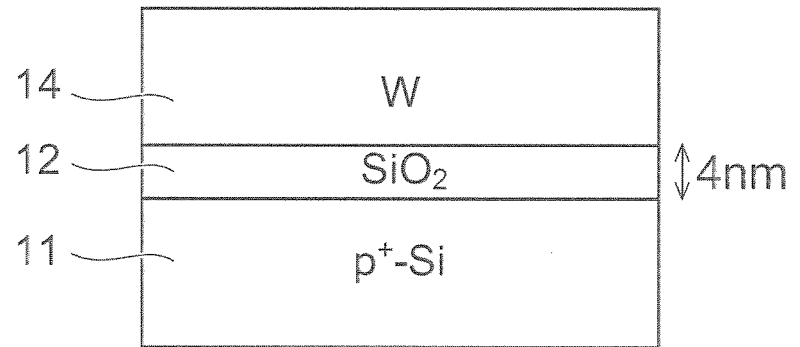


FIG. 11B

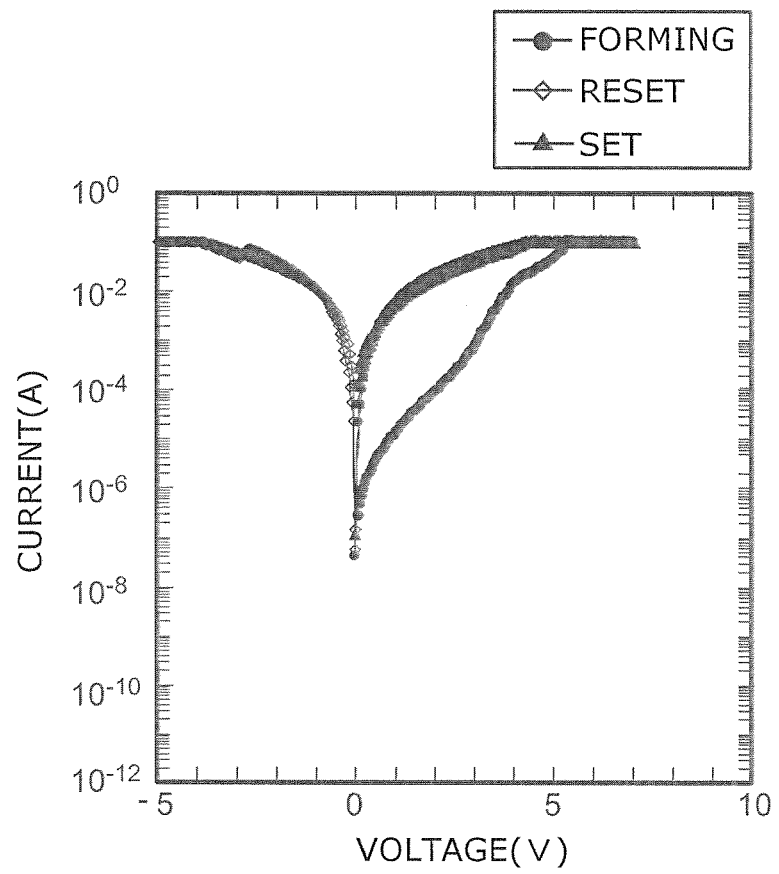


FIG. 12A

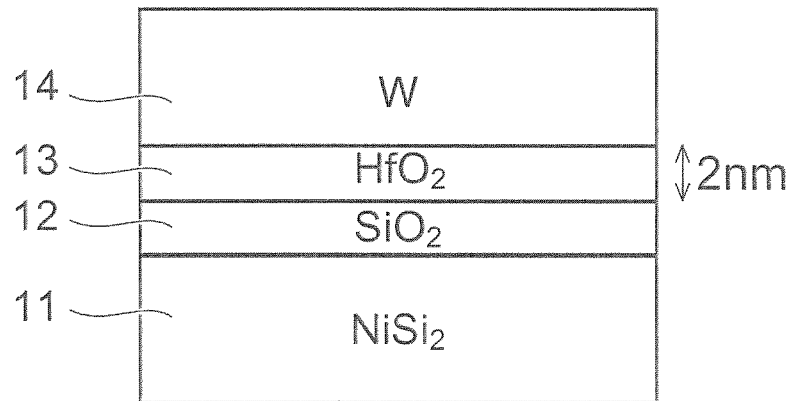


FIG. 12B

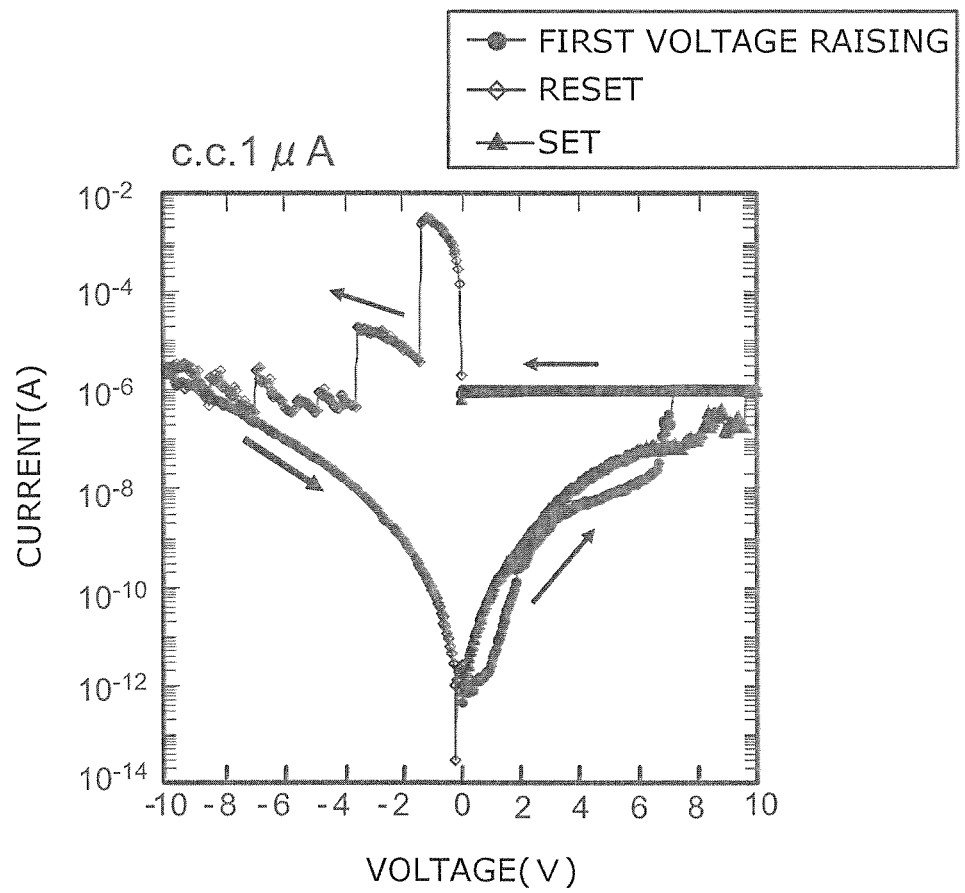


FIG. 13A

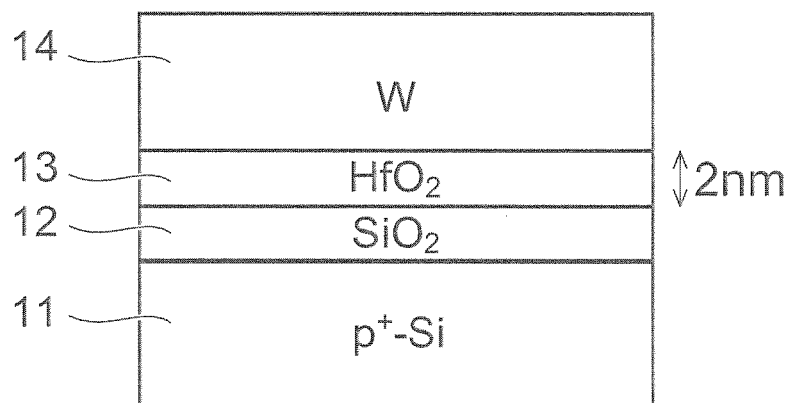
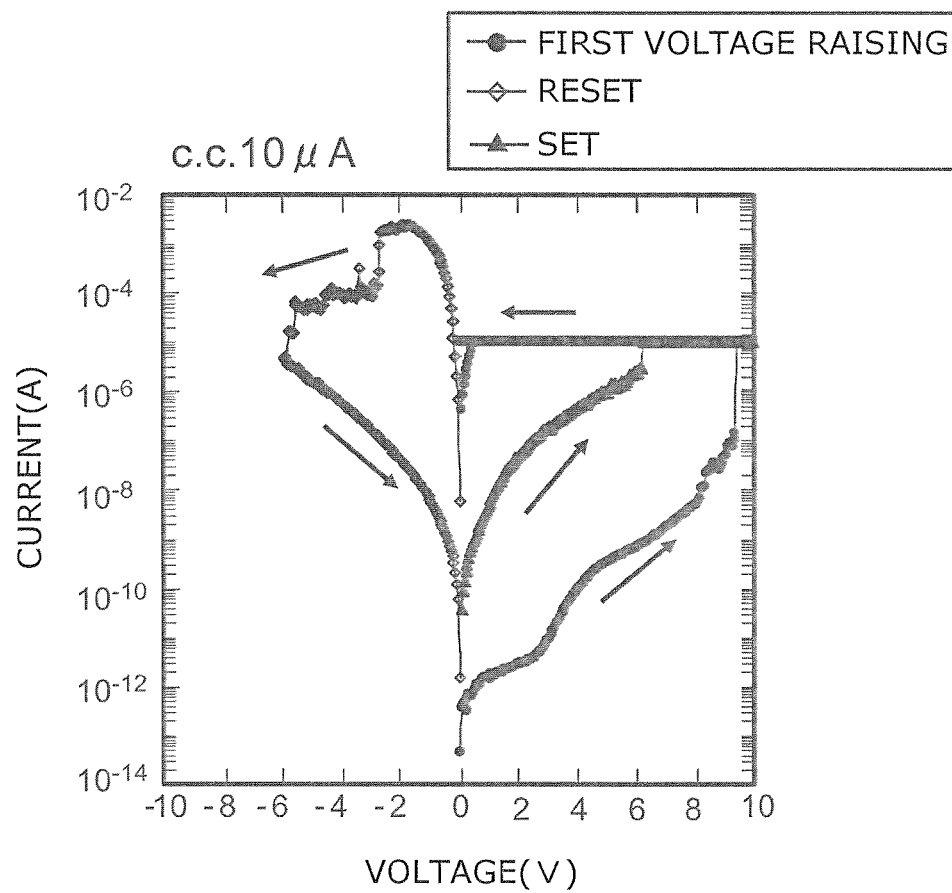


FIG. 13B



101

110

113

FORMING

114

114

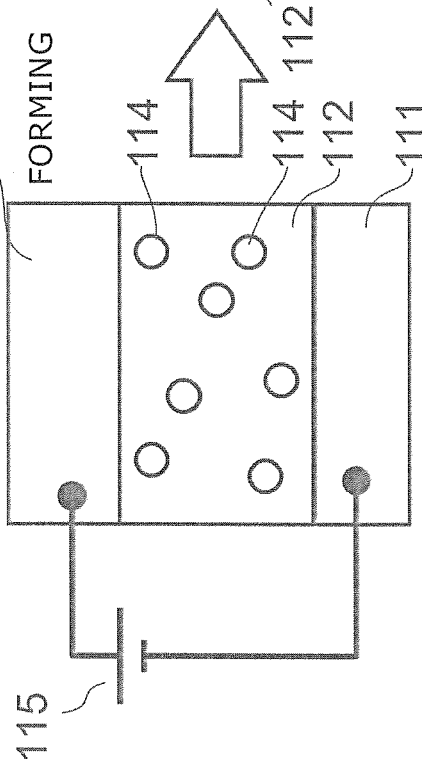
112

112

111

INITIAL
STATE

115



110

113

RESET

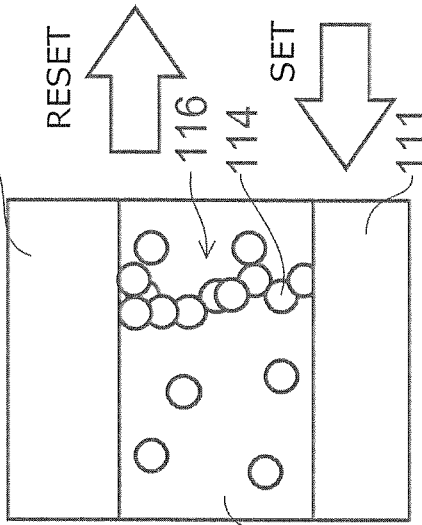
116

114

SET

111

LOW RESISTANCE
STATE



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113

114

116

112

114

111

HIGH RESISTANCE
STATE

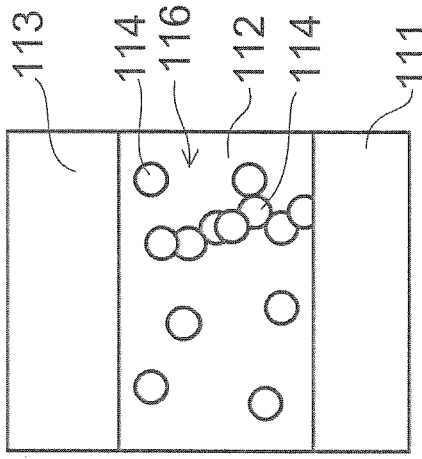


FIG. 14A

FIG. 14B

FIG. 14C

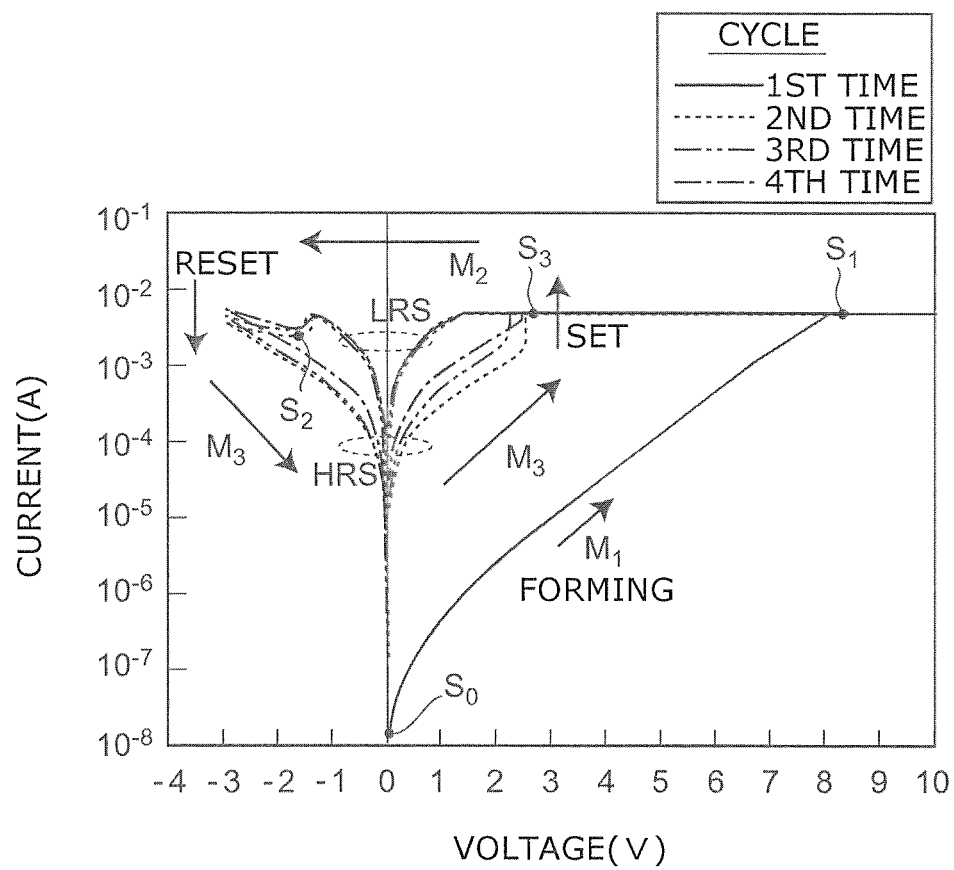


FIG. 15