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(54) **SEMICONDUCTOR DEVICE INCLUDING
RESISTANCE CHANGE LAYER WITH
METAL-ORGANIC FRAMEWORK**

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ABSTRACT

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A semiconductor device includes a first electrode and a second electrode that are spaced apart from each other, and a resistance change layer disposed between the first and second electrodes and including a metal-organic framework having cavities. The resistance change layer includes channels disposed in the cavities, receiving metal ions provided from one electrode of the first and second electrodes.

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