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(54) **THREE-DIMENSIONAL MEMORY DEVICES
AND FABRICATING METHODS THEREOF**

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ABSTRACT

Three-dimensional (3D) memory devices and fabricating methods are disclose. A disclosed 3D memory device can comprises, a first semiconductor structure comprising an array of first type memory cells, a second semiconductor structure comprising an array of second type memory cells different from the first type memory cells, a third semiconductor structure comprising a first peripheral circuit, and a fourth semiconductor structure comprising a second peripheral circuit. The first semiconductor structure and the second semiconductor structure are sandwiched between the third semiconductor structure and the fourth semiconductor structure in a vertical direction.

