

ABSTRACT

CHALCOGENIDE MATERIAL AND ELECTRONIC DEVICE INCLUDING THE SAME

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A chalcogenide material and an electronic device are provided. The chalcogenide material may include 0.1-5 atomic percent (at%) of silicon, 15-22 at% of germanium, 30-35 at% of arsenic and 40-50 at% of selenium. The electronic device may include a semiconductor memory device, the semiconductor memory device including a first memory cell that includes a first switching element, wherein the first switching element may include a chalcogenide material including 0.1-5 atomic percent (at%) of silicon, 15-22 at% of germanium, 30-35 at% of arsenic, and 40-50 at% of selenium.

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FIG. 9D