552. Title:TiSi2 nanocrystal metal oxide semiconductor field effect transistor memory
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Abstract:A TiSi2 nanocrystal (NC) memory was fabricated. TiSi2 NCs were synthesized on SiO2 by annealing Ti covered Si NCs. Compared to the reference Si NC memory, both experiment and simulation results show that TiSi2 NC memory exhibits larger memory window, faster writing and erasing, and longer retention lifetime as a result of the metallic property of the silicide NCs. Due to thermally stable, CMOS compatible properties, TiSi2 NCs are highly promising for nonvolatile memory device application.