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The Developing Status and Challenge for Non-volatile Memory

3 High cited paper (Top 1%) 113 973 2000
SCI 212 , SCI 6

Abstract As the semiconductor device continues scaling down, conventional Flash memory is facing more and more bottlenecks and will be very difficult to go through 16 nm node. According to the white paper of ITRS 2011, STT-MRAM and RRAM are thought as the most promising technologies among various emerging non-volatile memory concepts, and are worthy to put additional focuses on research and development to accelerate the progress toward commercialization. In this talk, semiconductor memory will be summarized, especially focus on flash memory. Then, a brief introduction on RRAM technology will be given and its opportunities & challenges will be discussed. Lastly, research works of RRAM in IMECAS will be introduced.

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