Novel Tunneling Oxynitride Layer Applied to Floating Gate Flash Memory

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Abstract

In this letter, we propose a simple novel method to fabricate robust, reliable, high nitrogen content oxynitride dielectrics. Moreover, the process can be easily adopted by current manufacturing technology applied to floating gate flash memory. The proposed approach is realized by ammonia (NH_3) nitridation of chemical oxide and re-oxidation with oxygen (O_2). The novel oxynitride process is not only compatible to standard CMOS process but practically enough to ensure the improvement of flash memory with less cost in manufacturing.

Keyword：Tunneling Oxynitride, Floating Gate Flash Memory