

Abstract

In this work, boron-doped zinc oxide (BZO) film was used for the applications of non-volatile memory (NVM). The memory structures are Al / BZO / TaN and Ni / BZO / Ni thin films were deposited by using RF sputtering. And we had two different style were As-deposited and Anneal 500 °C by useing RTA in N2 for seven minutes. The electrical characteristics were studied including resistance switching, conduction mechanism.

Keywords: boron-doped ZnO (BZO) , resistance switching, conduction mechanism, cycling endurance, data retention and reading durability.