METHOD FOR FABRICATING A CRYSTALLINE ALKALINE EARTH METAL OXIDE INTERFACE WITH SILICON

Abstract of the Disclosure

A method for fabricating a semiconductor structure comprises the steps of providing a silicon substrate (10) having a surface (12); forming on the surface of the silicon substrate an interface (14) comprising a single atomic layer of silicon, nitrogen, and a metal; and forming one or more layers of a single crystal oxide (26) on the interface. The interface comprises an atomic layer of silicon, nitrogen, and a metal in the form $MSiN_2$, where M is a metal. In a second embodiment, the interface comprises an atomic layer of silicon, a metal, and a mixture of nitrogen and oxygen in the form $MSi[N_{1-x}O_x]_2$, where M is a metal and X is $0 \leq X < 1$.

FIG. 10 accompanies this abstract.

This Sheet Has Been Replaced

