

SEMICONDUCTOR -METAL-ON-INSULATOR STRUCTURES, METHODS OF FORMING SUCH STRUCTURES, AND SEMICONDUCTOR DEVICES INCLUDING SUCH STRUCTURES

Abstract

Methods for fabricating semiconductor-metal-on-insulator (SMOI) structures include forming an acceptor wafer including an insulator material on a first semiconductor substrate, forming a donor wafer including a conductive material and an amorphous silicon material on a second semiconductor substrate, and bonding the amorphous silicon material of the donor wafer to the insulator material of the acceptor wafer. SMOI structures formed from such methods are also disclosed, as are semiconductor devices including such SMOI structures.

Fig. 6