FORMATION OF THROUGH-WAFER ELECTRICAL INTERCONNECTIONS AND OTHER STRUCTURES USING A THIN DIELECTRIC MEMBRANE

Abstract

Providing through-wafer interconnections in a semiconductor wafer includes forming a sacrificial membrane (110) in a possibly recessed portion of a semiconductor wafer, depositing metallization (124) over one side of the wafer so as to cover exposed portions of the sacrificial membrane facing the one side of the wafer, removing possibly after etching for exposing exposed portions of the sacrificial membrane facing the other side of the wafer, and depositing metallization (130) over the other side of the wafer so as to contact the previously deposited metallization. Techniques also are disclosed for providing capacitive and other structures using thin metal membranes.

FIG. 1F