A Method To Fabricate Ge and Si Devices Together For Performance Enhancement

Abstract

A method for forming a semiconductor structure having devices formed on both sides. A first substrate and a second substrate are provided. We form a first dielectric layer over the first substrate. We form a first insulating layer over the second substrate. We bond the first dielectric layer and the first dielectric layer to form a first structure. The first structure comprised of the first substrate, an insulation layer (combined first dielectric and first insulating layers) and the second substrate. We reduce the thickness of the first substrate. We form via plugs through the first substrate and the insulation layer and at least partially through the second substrate. We form first active devices on the surface of the first substrate. We form a first capping layer over the first active devices and the first substrate. We reduce the thickness of the second substrate to expose the via plugs.

Figure 8