# METHODS FOR FABRICATING AND FILLING CONDUCTIVE VIAS AND CONDUCTIVE VIAS SO FORMED

Abstract

Methods for forming conductive vias include forming one or more via holes in a substrate. The via holes may be formed with a single mask, with the protective layers, bond pads, or other features of the substrate acting as hard masks in the event that a photomask is removed during etching processes. The via holes may be configured to facilitate adhesion of a dielectric coating that includes a low-K dielectric material to the surfaces thereof. A barrier layer may be formed over surfaces of each via hole. A base layer, which may comprise a seed material, may be formed to facilitate the subsequent, selective deposition of conductive material over the surfaces of the via hole. The resulting semiconductor devices, intermediate structures, and assemblies and electronic devices that include the semiconductor devices that result from these methods are also disclosed.

**FIG. 11**