ABSTRACT OF THE DISCLOSURE

METHOD FOR FABRICATING COPPER INTERCONNECTS

A method for capping copper or copper alloy interconnects. A dielectric layer is formed overlaying a semiconductor substrate. An opening is formed in the dielectric layer and subsequently embedded copper or copper alloy form an interconnect structure. A silicon layer is formed on the copper or copper alloy by sputtering or chemical vapor deposition. A copper silicide layer is formed by reacting the silicon layer with the underlying copper or copper alloy as a capping layer.

(FIG. 1A)