PROCESS FOR FORMING A SEMICONDUCTOR DEVICE AND A CONDUCTIVE STRUCTURE

Abstract of the Disclosure

Semiconductor devices and conductive structures can be formed having a metallic layer. In one embodiment, a semiconductor device includes an amorphous metallic layer (22) and a crystalline metallic layer (42). The amorphous metallic layer (22) helps to reduce the likelihood of penetration of contaminants through the amorphous metallic layer (22). A more conductive crystalline metallic layer (42) can be formed on the amorphous metallic layer (22) to help keep resistivity relatively low. When forming a conductive structure, a metal-containing gas and a scavenger gas flow simultaneously during at least one point in time. The conductive structure may be part of a gate electrode.

(Fig. 4 to accompany abstract).