DISCONTINUOUS/NON-UNIFORM METAL CAP STRUCTURE AND PROCESS FOR INTERCONNECT INTEGRATION

Abstract

An interconnect structure including a noble metal-containing cap that is present at least on some portion of an upper surface of at least one conductive material that is embedded within an interconnect dielectric material is provided. In one embodiment, the noble metal-containing cap is discontinuous, e.g., exists as nuclei or islands on the surface of the at least one conductive material. In another embodiment, the noble metal-containing cap has a non-uniform thickness across the surface of the at least one conductive material.

Fig. 4E