

Brittle Metal Alloy Sputtering Targets And Method Of Fabricating Same

Abstract of the Disclosure

[0040] A method of fabricating a sputtering target assembly comprises steps of mixing/blending selected amounts of powders of at least one noble or near-noble Group VIII metal at least one Group IVB, VB, or VIB refractory metal; forming the mixed/blended powder into a green compact having increased density; forming a full density compact from the green compact; cutting a target plate slice from the full density compact; diffusion bonding a backing plate to a surface of the target plate slice to form a target/backing plate assembly; and machining the target/backing plate assembly to a selected final dimension. The disclosed method is particularly useful for fabricating large diameter Ru-Ta alloy targets utilized in semiconductor metallization processing.