SPUTTERING TARGETS AND METHODS FOR FABRICATING SPUTTERING TARGETS HAVING MULTIPLE MATERIALS

Abstract

A sputter target comprises a plurality of materials. The plurality of materials includes at least a first material and a second material. The first material is comprised of cobalt (Co), chromium (Cr), ruthenium (Ru), nickel (Ni), or iron (Fe). The second material is comprised of carbon (C), a carbon (C)-containing material, a carbide, a nitrogen (N)-containing material, a nitride, a silicon (Si)-containing material, a silicide, an oxygen (O)-containing material, an oxide, boron (B), a boron (B)-containing material or a boride. The second material constitutes a phase where the phase of the second material has an average size between greater than 0 micron and 50 microns. According to one aspect, the first material comprises at least 15 atomic percent or greater. Methods of fabricating sputter targets by blending a plurality of materials are also disclosed.

(Figure 1)