

FERROUS ALLOY SPUTTERING TARGET AND PREPARATION METHOD

THEREOF

ABSTRACT

Provided is a ferrous alloy sputtering target, containing iron (Fe),
5 molybdenum (Mo), a first additive metal (Ti, Cu, Ge, or any combination
thereof) and/or a second additive metal (Co, Mn, Ag, Au, Pd, Pt, Rh, or any
combination thereof). The ferrous alloy sputtering target comprises iron in an
amount of 25 at% to 55 at% based on a total atom number of the target and has
spherical Fe-Mo alloy grains having an average particle size less than 80 μm .
10 Provided is also a preparation method thereof, which comprises adopting Fe-
Mo alloy atomized powder with a D95 of less than 125 μm as raw material,
mixing raw material powders, and sintering steps. The technical means can
reduce the number of metallurgical micropores in the target, improve the
conductivity uniformity of the target, and reduce the occurrences of arcing
15 during sputtering, thereby comprehensively improving the quality of the
ferrous alloy sputtering target.

Fig. 1