

**Title of Invention: Fe-Pt-Ag Based Target And Preparation Method Thereof****ABSTRACT**

Provided are a Fe-Pt-Ag based target and a preparation method thereof. The Fe-Pt-Ag based target includes Fe, Pt, Ag and a non-magnetic component. Based on a total atom number of the Fe-Pt-Ag based target, a content of Pt is 5 at% to 40 at%, and a content of Ag is 1 at% to 15 at%. Meanwhile, a content of S of the Fe-Pt-Ag based target is less than 50 ppm, and a maximum area of Ag phase in a metallographic microstructure of the Fe-Pt-Ag based target is less than  $10\ \mu\text{m}^2$ . By controlling the content of Pt, Ag and S and the maximum area of Ag phase, the Fe-Pt-Ag based target can enhance the relative density, produce less falling particles during sputtering, and enhance oxidation resistance ability.

[FIG. 1]