

ABSTRACT

Provided is a sputtering target which can lower a heat treatment temperature for ordering a Fe-Pt magnetic phase and can suppress generation of particles during sputtering. The sputtering target is a nonmagnetic material-dispersed sputtering target containing Fe, Pt and Ge. The sputtering target includes at least one magnetic phase satisfying a composition represented by $(\text{Fe}_{1-\alpha}\text{Pt}_{\alpha})_{1-\beta}\text{Ge}_{\beta}$, as expressed in an atomic ratio for Fe, Pt and Ge, in which α and β represent numbers meeting $0.35 \leq \alpha \leq 0.55$ and $0.05 \leq \beta \leq 0.2$, respectively. The magnetic phase has a ratio ($S_{\text{Ge30mass\%}} / S_{\text{Ge}}$) of 0.5 or less. The ratio ($S_{\text{Ge30mass\%}} / S_{\text{Ge}}$) is an average area ratio of Ge-based alloy phases containing a Ge concentration of 30% by mass or more ($S_{\text{Ge30mass\%}}$) to an area ratio of Ge (S_{Ge}) calculated from the entire composition of the sputtering target, in element mapping by EPMA of a polished surface obtained by polishing a cross section perpendicular to a sputtering surface of the sputtering target.