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(54) MAGNETORESISTIVE EFFECT ELEMENT, MAGNETIC MEMORY AND ARTIFICIAL INTELLIGENCE SYSTEM

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(57) **ABSTRACT**

Provided are a magnetoresistive element in which the magnetization direction in a recording layer can be efficiently reversed with low resistance and without reducing reversal efficiency by a write current flowing in a heavy-metal layer; a magnetic memory; and an artificial intelligence system. A magnetoresistive element **10** includes: a heavy-metal layer **11** formed by stacking an Ir layer(s) **12** and a Pt layer(s) **13**; a recording layer **16** provided to be opposed to the heavy-metal layer **11**, and formed to include a first ferromagnetic layer having a reversible magnetization; a reference layer **18** formed to include a second ferromagnetic layer in which the magnetization direction is fixed; and a barrier layer **17** sandwiched between the first ferromagnetic layer and the second ferromagnetic layer, and formed of an insulator. The magnetization direction in the first ferromagnetic layer is reversed by a write current supplied to the heavy-metal layer **11**.