

THE SPIN ACCUMULATION EFFECT AND PHASE
TRANSITIONS OF MARTENSITE/AUSTENITE
TYPE IN A MAGNETIC FILM
WITH DIFFERENT
METAL LEADS

V.V. Koledov, A.F. Popkov¹, V.G. Shavrov

Institute of Radioengineering and
Electronics of Russian Acad. Sci.
(11/7, Mokhovaya Str., Moscow 125009, Russia),

¹Federal State Unitary Enterprise
"F.V. Lukin Research Institute of Physical Problems"
(4806 Passage, Bld. 6, Zelenograd,
Moscow 124460, Russia)

S u m m a r y

The spin accumulation influence on a shift of phase transition points of the martensite/austenite type is considered for the thin magnetic film of a shape-memory alloy. It is shown that, for the three-layer structure containing different metallic leads, one should expect the non-reciprocal effect of a current injection shift of the temperature hysteresis of magnetic and conducting properties connected with the spin accumulation effect approximately by $\Delta T/T \sim 0.1\%$ for the current densities $J \sim 10^8$ A/cm².