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Anomalous remanent magnetization dependence of exchange bias effect in Ni50Mn37In13[1] BAOMIN WANG, YONG LIU, School of Mechanical and Aerospace Engineering, Nanyang Technological University, 639798, Singapore, LAN WANG, Division of Physics and Applied Physics, School of Physical and Mathematical Sciences, Nanyang Technological University, 637371, Singapore — Here, we report an anomalous remanent magnetization dependence of exchange bias effect in Ni50Mn37In13 alloy. Both the value of exchange bias field and its sign can be tuned by the amplitude of remanent magnetization without changing its sign. This tunability is strongly dependent on the direction of initial magnetizing field for the hysteresis loop measurements. These results can be explained well by our recent proposal of isothermal field-induced transition from superspin glass to superferromagnetic state in Ni50Mn37In13 alloy.

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BaoMin Wang
School of Mechanical and Aerospace Engineering,
Nanyang Technological University, 639798, Singapore

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