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(54) **SPIN LOGIC DEVICE BASED ON
SPIN-CHARGE CONVERSION AND SPIN
LOGIC ARRAY USING THE SAME**

(71) Applicants: **INDUSTRY-ACADEMIC
COOPERATION FOUNDATION,
YONSEI UNIVERSITY, Seoul (KR);
INDUSTRY-UNIVERSITY
COOPERATION FOUNDATION
HANYANG UNIVERSITY ERICA
CAMPUS, Ansan (KR)**

(72) Inventors: **Jongill HONG, Seoul (KR);
Saeroonter OH, Ansan (KR)**

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ABSTRACT

Disclosed are a spin logic device based on spin-charge conversion and a spin logic array using the same. A reconfigurable spin logic array according to an exemplary embodiment of the present invention may include: an input terminal receiving at least three current signals; a plurality of wires transmitting the current signal in connection with the input terminal and including a horizontal wire and a vertical wire which cross each other; a first gate array in which at least one first majority gate connected to the input terminal through the wires and implemented based on the spin logic device is arranged; and a second gate array in which at least one second majority gate connected to the first gate array through the wires and implemented based on the spin logic device is arranged.

