US 20240251685A1

(19) **United States**

(12) **Patent Application Publication** (10) **Pub. No.: US 2024/0251685 A1**

KIM et al. (43) **Pub. Date: Jul. 25, 2024**

(54) **MAGNETIC MEMORY DEVICES USING SPIN CURRENT AND ELECTRONIC APPARATUSES INCLUDING THE MAGNETIC MEMORY DEVICES**

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(21) Appl. No.: **18/492,181**

(22) Filed: **Oct. 23, 2023**

(30) **Foreign Application Priority Data**

Jan. 20, 2023 (KR) 10-2023-0009034

Publication Classification

(51) **Int. Cl.**

H10N 50/20 (2006.01)
H10B 61/00 (2006.01)
H10N 50/85 (2006.01)

(52) **U.S. Cl.**

CPC ***H10N 50/20*** (2023.02); ***H10B 61/00*** (2023.02); ***H10N 50/85*** (2023.02)

(57) **ABSTRACT**

A magnetic memory device may include a spin current channel layer, a wiring crossing the spin current channel layer, and an MTJ layer at an intersection of the spin current channel layer and the wiring. The spin current channel layer may include an MgO-based layer and a beta (β)-phase tungsten (W) layer on the MgO-based layer. The beta (β)-phase tungsten (W) layer may be in contact with the MTJ layer.