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Chu et al.(10) **Pub. No.: US 2024/0251539 A1**(43) **Pub. Date: Jul. 25, 2024**(54) **METHOD FOR FORMING DIFFERENT TYPES OF DEVICES**(71) Applicant: **Taiwan Semiconductor Manufacturing Co., Ltd., Hsinchu (TW)**(72) Inventors: **Feng-Ching Chu, Hsinchu (TW); Wei-Yang Lee, Taipei City (TW); Feng-Cheng Yang, Hsinchu (TW); Yen-Ming Chen, Hsinchu (TW)**(21) Appl. No.: **18/587,506**(22) Filed: **Feb. 26, 2024****Related U.S. Application Data**

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(57)

ABSTRACT

A semiconductor device according to the present disclosure includes a gate-all-around (GAA) transistor in a first device area and a fin-type field effect transistor (FinFET) in a second device area. The GAA transistor includes a plurality of vertically stacked channel members and a first gate structure over and around the plurality of vertically stacked channel members. The FinFET includes a fin-shaped channel member and a second gate structure over the fin-shaped channel member. The fin-shaped channel member includes semiconductor layers interleaved by sacrificial layers.

