

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2024/0215264 A1 Lee et al.

Jun. 27, 2024 (43) **Pub. Date:**

(54) DATA STORAGE CELL, MEMORY, AND MEMORY FABRICATION METHOD **THEREOF**

(71) Applicant: UNITED MICROELECTRONICS

CORP., Hsin-Chu City (TW)

Inventors: **Kuo-Hsing Lee**, Hsinchu County (TW); Sheng-Yuan Hsueh, Tainan City (TW)

Assignee: UNITED MICROELECTRONICS CORP., Hsin-Chu City (TW)

Appl. No.: 18/433,347

Filed: Feb. 5, 2024 (22)

Related U.S. Application Data

(63) Continuation of application No. 17/074,584, filed on Oct. 19, 2020, now Pat. No. 11,956,974.

(30)Foreign Application Priority Data

Aug. 19, 2020 (CN) 202010835714.X

Publication Classification

(51) Int. Cl. H10B 63/00 (2006.01)H10B 61/00 (2006.01)H10N 50/01 (2006.01)H10N 70/00 (2006.01)

U.S. Cl. (52)

> CPC H10B 63/30 (2023.02); H10B 61/22 (2023.02); H10B 63/80 (2023.02); H10N 50/01 (2023.02); H10N 70/011 (2023.02)

(57)ABSTRACT

The invention discloses a data storage cell. The data storage cell includes a storage structure, a first transistor, and a second transistor. A first end of the storage structure is electrically connected to a bit line. The first transistor includes a first gate, a first drain, and a first source. The second transistor includes a second gate, a second drain, and a second source. The first gate is electrically connected to the second gate. A second end of the storage structure is electrically connected to the first drain and the second drain. The first source and the second source are electrically connected to a source line.

