

# (19) United States

## (12) Patent Application Publication (10) Pub. No.: US 2024/0213257 A1 YUAN et al.

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

### (54) ARRAY SUBSTRATE AND PREPARATION METHOD THEREOF AND DISPLAY DEVICE

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- (21) Appl. No.: 18/385,876
- Filed: Oct. 31, 2023 (22)
- (30)Foreign Application Priority Data

Oct. 31, 2022 (CN) ...... 202211348341.9

#### **Publication Classification**

(51) Int. Cl. H01L 27/12

(2006.01)

U.S. Cl.

CPC ...... H01L 27/1225 (2013.01); H01L 27/124

(2013.01); *H01L 27/127* (2013.01)

#### (57)**ABSTRACT**

The present application relates to an array substrate and a preparation method thereof, and a display device; wherein the array substrate comprises a substrate and a plurality of sub-pixels distributed in an array on the substrate, the sub-pixels comprising M oxide thin film transistors, each oxide thin film transistor comprising a modulation electrode, a gate electrode, a source electrode and a drain electrode arranged in a stack, wherein the modulation electrodes of the M oxide thin film transistors are electrically connected to each other as a modulation layer, and the modulation layer is electrically connected to the gate electrode through N first vias, wherein M and N are both integers, and N<M.

