



US 20240237453A1

(19) **United States**

(12) **Patent Application Publication**  
**ZENG et al.**

(10) **Pub. No.: US 2024/0237453 A1**

(43) **Pub. Date: Jul. 11, 2024**

(54) **DISPLAY SUBSTRATE AND PREPARATION METHOD THEREOF, AND DISPLAY APPARATUS**

(71) Applicants: **Chengdu BOE Optoelectronics Technology Co., Ltd.**, Chengdu (CN); **BOE Technology Group Co., Ltd.**, Beijing (CN)

(72) Inventors: **Chao ZENG**, Beijing (CN); **Weiyun HUANG**, Beijing (CN); **Youngyik KO**, Beijing (CN)

(21) Appl. No.: **18/614,777**

(22) Filed: **Mar. 25, 2024**

**Related U.S. Application Data**

(63) Continuation of application No. 17/292,011, filed on May 7, 2021, now Pat. No. 11,997,903, filed as application No. PCT/CN2020/105788 on Jul. 30, 2020.

**Publication Classification**

(51) **Int. Cl.**  
**H10K 59/131** (2006.01)  
**G09G 3/3225** (2006.01)  
(52) **U.S. Cl.**  
CPC ..... **H10K 59/1315** (2023.02); **G09G 3/3225** (2013.01); **G09G 2310/0281** (2013.01)

(57) **ABSTRACT**

Provided are a display substrate and a preparation method thereof, and a display apparatus. The display substrate includes a display region and a binding region located on one side of the display region. The binding region includes: a source driver circuit, a flexible printed circuit board, a first selector circuit, a second selector circuit and a plurality of selection connection lines. For at least one selection connection line of the plurality of selection connection lines, one end of the selection connection line is connected to an input port of the first selector circuit, and the other end is connected to an input port of the second selector circuit. The flexible printed circuit board is disposed on one side, away from the display region, of the source driver circuit, and the plurality of selection connection lines are arranged between the source driving circuit and the flexible printed circuit board.

