US 20240244861A1

(19) **United States**

(12) **Patent Application Publication** (10) **Pub. No.: US 2024/0244861 A1**

LI (43) **Pub. Date: Jul. 18, 2024**

(54) **QUANTUM DOT LIGHT-EMITTING DEVICES AND METHODS OF PREPARING THE SAME, DISPLAY SUBSTRATES, AND DISPLAY APPARATUSES**

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(21) Appl. No.: **17/921,545**

(22) PCT Filed: **Oct. 28, 2021**

(86) PCT No.: **PCT/CN2021/127191**

§ 371 (c)(1),
(2) Date: **Oct. 26, 2022**

Publication Classification

(51) **Int. Cl.**
H10K 50/115 (2006.01)
H10K 85/60 (2006.01)

(52) **U.S. Cl.**
CPC ***H10K 50/115*** (2023.02); *H10K 85/653* (2023.02); *H10K 85/654* (2023.02)

(57) **ABSTRACT**

The present disclosure relates to a quantum dot light-emitting device and a method of preparing the same, a display substrate, and a display apparatus. The quantum dot light-emitting device includes a first electrode layer, a light-emitting layer, and a second electrode layer, the light-emitting layer being provided between the first electrode layer and the second electrode layer, and the light-emitting layer including quantum dots and electrolytes, where the quantum dots are provided between the electrolytes in a direction from the first electrode layer to the second electrode layer; and the electrolytes undergo an electrochemical reaction in the presence of an electric field to provide an equal number of electrons and holes. According to the embodiments of the present disclosure, the electrons and holes injected into the quantum dots can be balanced, which is conducive to improving imbalance of carriers injected into the quantum dot light-emitting device, and thus improving the light-emitting efficiency of the quantum dot light-emitting device.