

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2024/0237388 A1

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

(54) LIGHT EMITTING DEVICE AND PRODUCING METHOD THEREOF, AND DISPLAY DEVICE

(71) Applicants: Beijing BOE Technology Development Co., Ltd., Beijing (CN); BOE Technology Group Co., Ltd., Beijing (CN)

(72) Inventors: Zhigao Lu, Beijing (CN); Haowei Wang, Beijing (CN); Xiaoyuan Zhang, Beijing (CN); Zhuo Chen, Beijing

(73) Assignees: Beijing BOE Technology Development Co., Ltd., Beijing (CN); BOE Technology Group Co., Ltd., Beijing (CN)

(21) Appl. No.: 17/922,821

PCT Filed: Dec. 29, 2021

(86) PCT No.: PCT/CN2021/142481

> § 371 (c)(1), (2) Date:

Nov. 2, 2022

Publication Classification

| (51) | Int. Cl. | |
|------|-------------|-----------|
| | H10K 50/16 | (2006.01) |
| | H10K 50/115 | (2006.01) |
| | H10K 71/20 | (2006.01) |
| | H10K 101/30 | (2006.01) |
| | H10K 102/00 | (2006.01) |

(52) U.S. Cl.

CPC H10K 50/166 (2023.02); H10K 50/115 (2023.02); H10K 71/233 (2023.02); H10K 2101/30 (2023.02); H10K 2102/351 (2023.02)

(57)ABSTRACT

The present application provides a light emitting device and a producing method thereof, and a display device, which relates to the technical field of displaying, and may solve the problem of quantum-dot remaining. A light emitting device, wherein the light emitting device includes: a plurality of light emitting areas that are arranged in an array, and non-light emitting areas between neighboring light emitting areas; each of the light emitting areas includes an inorganic electron transporting layer, an organic electron transporting layer and a quantum-dot layer that are arranged sequentially in layer configuration; and an absolute value of a difference between an energy value of a lowest unoccupied molecular orbital of the inorganic electron transporting layer and an energy value of a lowest unoccupied molecular orbital of the organic electron transporting layer is less than or equal to a preset value.

