



US 20240179932A1

(19) **United States**

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

(10) **Pub. No.: US 2024/0179932 A1**

(43) **Pub. Date: May 30, 2024**

(54) **ORGANIC LIGHT EMITTING DIODE AND  
ORGANIC LIGHT EMITTING DEVICE  
INCLUDING THE SAME**

**Publication Classification**

(51) **Int. Cl.**

*H10K 50/12* (2006.01)

*H10K 50/13* (2006.01)

*H10K 50/844* (2006.01)

*H10K 85/30* (2006.01)

*H10K 85/40* (2006.01)

(52) **U.S. Cl.**

CPC ..... *H10K 50/12* (2023.02); *H10K 50/13*  
(2023.02); *H10K 50/844* (2023.02); *H10K*  
*85/346* (2023.02); *H10K 85/40* (2023.02)

(71) Applicants: **LG DISPLAY CO., LTD.**, Seoul (KR);  
**LT Materials Co.,Ltd**, Yongin-si (KR)

(72) Inventors: **Ji-Seon JANG**, Paju-si (KR); **Chi-Ho**  
**LEE**, Paju-si (KR); **Suk-Young BAE**,  
Paju-si (KR); **Han-Jin AHN**, Paju-si  
(KR); **Jun-Yun KIM**, Paju-si (KR);  
**Dae-Hyuk CHOI**, Yongin-si (KR);  
**Dong-Jun KIM**, Yongin-si (KR);  
**Yong-Woo KIM**, Yongin-si (KR);  
**Yong-Geun JUNG**, Yongin-si (KR);  
**Jin-Hwan SHIN**, Yongin-si (KR);  
**Seok-Hyeon YU**, Yongin-si (KR)

(73) Assignees: **LG DISPLAY CO., LTD.**, Seoul (KR);  
**LT Materials Co.,Ltd**, Yongin-si (KR)

(21) Appl. No.: **18/385,901**

(22) Filed: **Oct. 31, 2023**

(30) **Foreign Application Priority Data**

Nov. 11, 2022 (KR) ..... 10-2022-0150605

(57)

**ABSTRACT**

The present disclosure relates to an organic light emitting diode and an organic light emitting device including the same. The organic light emitting diode includes a first electrode; a second electrode facing the first electrode; and a first blue emitting material layer including a first compound and a second compound and positioned between the first and second electrodes, wherein the first compound is represented by Formula 1, and the second compound is represented by Formula 3. According to an aspect of the present disclosure, it is allowed to provide an OLED and an organic light emitting device having high emitting efficiency and/or improved lifespan.

