

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2024/0237506 A1 LEE et al.

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

(54) ORGANOMETALLIC COMPOUND, ORGANIC LIGHT EMITTING DIODE AND ORGANIC LIGHT EMITTING DEVICE HAVING THE COMPOUND

(71) Applicant: LG DISPLAY CO., LTD., Seoul (KR)

(72) Inventors: Na-Yeon LEE, Paju-si (KR); Young-Woo WOO, Paju-si (KR); Han-Sol PARK, Paju-si (KR); Ku-Sun CHOUNG, Paju-si (KR)

(73) Assignee: LG DISPLAY CO., LTD., Seoul (KR)

(21) Appl. No.: 18/236,768

(22) Filed: Aug. 22, 2023

(30)Foreign Application Priority Data

Dec. 1, 2022 (KR) 10-2022-0165560

Publication Classification

(51) Int. Cl. H10K 85/30 (2006.01)C07F 15/00 (2006.01)C09K 11/06 (2006.01)

(52) U.S. Cl. CPC H10K 85/342 (2023.02); C07F 15/0033 (2013.01); C09K 11/06 (2013.01); H10K 50/12 (2023.02)

(57)**ABSTRACT**

The present disclosure relates to an organometallic compound having the following structure of Chemical Formula 1, $Ir(L_A)_m(L_B)_n$, an organic light emitting diode (OLED) where the organometallic compound is applied to an emitting material layer and an organic light emitting device. The luminous efficiency, color purity and luminous lifespan of the OLED and the organic light emitting device can be improved.

D1

