

# (19) United States

### (12) Patent Application Publication (10) Pub. No.: US 2024/0244865 A1 CHOUNG et al.

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

### (54) ORGANIC LIGHT EMITTING DEVICE COMPRISING ORGANOMETALLIC COMPOUND AND PLURALITY OF HOST **MATERIALS**

(71) Applicant: LG Display Co., Ltd., Seoul (KR)

(72) Inventors: Kusun CHOUNG, Seoul (KR); Hansol PARK, Goyang-si (KR); Yoojeong

JEONG, Seoul (KR)

(73) Assignee: LG Display Co., Ltd., Seoul (KR)

(21) Appl. No.: 18/391,564

(22) Filed: Dec. 20, 2023

(30)Foreign Application Priority Data

(KR) ...... 10-2022-0188038

#### **Publication Classification**

(51) **Int. Cl.** H10K 50/12 (2023.01)H10K 50/13 (2023.01)

H10K 50/15	(2023.01)
H10K 50/16	(2023.01)
H10K 50/17	(2023.01)
H10K 85/30	(2023.01)
H10K 85/60	(2023.01)

(52) U.S. Cl.

CPC ...... H10K 50/12 (2023.02); H10K 50/13 (2023.02); H10K 50/15 (2023.02); H10K 50/16 (2023.02); H10K 50/171 (2023.02); H10K 85/342 (2023.02); H10K 85/6572 (2023.02); H10K 85/6574 (2023.02)

#### (57)ABSTRACT

Disclosed is an organic light-emitting device including: a first electrode; a second electrode facing the first electrode; and an organic layer disposed between the first electrode and the second electrode; wherein the organic layer includes a light-emissive layer, wherein the light-emissive layer includes a dopant material and a host material, wherein the dopant material includes an organometallic compound represented by Chemical Formula 1, wherein the host material includes a mixture of a compound represented by Chemical Formula 2 and a compound represented by Chemical Formula 3. The organic light-emitting device has excellent light-emitting efficiency and lifespan.

## 100

