



US 20240215444A1

(19) **United States**

(12) **Patent Application Publication**
SAKUMA

(10) **Pub. No.: US 2024/0215444 A1**

(43) **Pub. Date: Jun. 27, 2024**

(54) **LIGHT EMITTING ELEMENT AND
POLYCYCLIC COMPOUND FOR THE SAME**

C07D 409/14 (2006.01)

C09K 11/06 (2006.01)

(71) Applicant: **Samsung Display Co., Ltd.**, Yongin-si
(KR)

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

CPC *H10K 85/6574* (2023.02); *C07D 405/14*
(2013.01); *C07D 409/14* (2013.01); *C09K*
11/06 (2013.01); *H10K 85/6572* (2023.02);
H10K 85/6576 (2023.02); *H10K 50/15*
(2023.02)

(72) Inventor: **Takao SAKUMA**, Yokohama (JP)

(21) Appl. No.: **18/501,961**

(22) Filed: **Nov. 3, 2023**

(30) **Foreign Application Priority Data**

Dec. 6, 2022 (KR) 10-2022-0169163

Publication Classification

(51) **Int. Cl.**

H10K 85/60 (2006.01)

C07D 405/14 (2006.01)

(57)

ABSTRACT

A light emitting element includes a first electrode, a second electrode on the first electrode, an emission layer between the first electrode and the second electrode, and a hole transport region between the first electrode and the emission layer. The hole transport region includes a polycyclic compound represented by Formula 1. The polycyclic compound is configured so that the hole transport properties of the hole transport region and the power efficiency of the light emitting element may be enhanced or improved.

ED

