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Oral Presentation

## [OLED2]OLED Material

Chair: Takahiro Komatsu (JOLED)

Co-Chair: Hitoshi Kuma (Idemitsu Kosan)

Wed. Nov 27, 2019 3:20 PM - 4:40 PM Room 204 (2F)

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3:40 PM - 4:00 PM

## [OLED2-2]Highly Efficient Deep Blue Fluorescence Emitter Based on Highly Conjugated Boron Structure

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Keywords: Boron TADF, blue TADF, Narrow FWHM

We synthesized and evaluated new deep blue fluorescence emitter, KH-FBD1. This emitter exhibits pure deep blue PL spectrum peak at 452 nm with 20 nm full width half maximum. Fabricated device shows high efficiency of 7.4% with deep blue color coordinate of (0.14, 0.07). In addition, this device indicates long operational lifetime ( $LT_{95}$ ) of 100 hours at initial luminance 1,000 cd/m<sup>2</sup>. It also shows high efficiency of 12.7% in high T<sub>1</sub> device with maintaining the deep blue color characteristic.