Accepted Manuscript

Title: Lifetime enhancement of blue thermally activated delayed fluorescent devices by separated carrier channels using dibenzofuran-triazine type hosts

Author: Yu Jin Kang Si Hyun Han Jun Yeob Lee

PII: S1226-086X(18)30004-2
DOI: https://doi.org/doi:10.1016/j.jiec.2018.01.003
Reference: JIEC 3822

To appear in:

Received date: 28-10-2017
Revised date: 29-12-2017
Accepted date: 2-1-2018

Please cite this article as: Y.J. Kang, S.H. Han, J.Y. Lee, Lifetime enhancement of blue thermally activated delayed fluorescent devices by separated carrier channels using dibenzofuran-triazine type hosts, *Journal of Industrial and Engineering Chemistry* (2018), https://doi.org/10.1016/j.jiec.2018.01.003

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

Lifetime enhancement of blue thermally activated delayed fluorescent devices by separated carrier channels using dibenzofuran-triazine type hosts

Yu Jin Kang[+], Si Hyun Han[+], Jun Yeob Lee*

School of Chemical Engineering, Sungkyunkwan University

2066, Seobu-ro, Jangan-gu, Suwon-si, Gyeonggi-do, 440-746, Korea

Fax: (+) 82-31-299-4716

E-mail: leej17@skku.edu

* To whom correspondence should be addressed

[+] Yu Jin Kang and Si Hyun Han contributed equally.

Abstract

Lifetime enhancement of blue thermally activated delayed fluorescent (TADF) devices was achieved using a carrier separating host structure which was developed using dibenzofuran-triazine type electron-transporting type host materials. Two host materials built on a chemical platform of dibenzofuran-triazine were synthesized as high triplet energy host materials for a blue TADF emitter and were mixed with a common hole-transporting type host. The separation of the carrier channel in the emitting layer lead to voltage reduction, external quantum efficiency increase, and lifetime extension of blue TADF devices.

Key words : blue device, thermally activated delayed fluorescent emitter, efficiency, lifetime, carrier

Accepted Manuscript

Download English Version:

https://daneshyari.com/en/article/6666570

Download Persian Version:

https://daneshyari.com/article/6666570

Daneshyari.com