

## Accepted Manuscript

Title: Progress and perspective of iridium-containing phosphorescent polymers for light-emitting diodes

Author: Fei Xu Hee Un Kim Ji-Hoon Kim Byung Jun Jung  
Andrew C. Grimsdale Do-Hoon Hwang



PII: S0079-6700(15)00027-1  
DOI: <http://dx.doi.org/doi:10.1016/j.progpolymsci.2015.01.005>  
Reference: JPPS 919

To appear in: *Progress in Polymer Science*

Received date: 25-2-2014  
Revised date: 15-1-2015  
Accepted date: 30-1-2015

Please cite this article as: Xu F, Kim HU, Kim J-H, Jung BJ, Grimsdale AC, Hwang D-H, Progress and perspective of iridium-containing phosphorescent polymers for light-emitting diodes, *Progress in Polymer Science* (2015), <http://dx.doi.org/10.1016/j.progpolymsci.2015.01.005>

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.

Progress and perspective of iridium-containing phosphorescent polymers for light-emitting diodes

Fei Xu<sup>a</sup>, Hee Un Kim<sup>a</sup>, Ji-Hoon Kim<sup>a</sup>, Byung Jun Jung<sup>b</sup>, Andrew C. Grimsdale<sup>c</sup>, Do-Hoon Hwang<sup>a\*</sup>

<sup>a</sup>Department of Chemistry, and Chemistry Institute for Functional Materials, Pusan National University, Busan 609-735, Korea

<sup>b</sup>Department of Materials Science and Engineering, The University of Seoul, Seoul 130-743, Korea

<sup>c</sup>School of Materials Science and Engineering, Nanyang Technological University, 50 Nanyang Avenue, Singapore 639798.

### Abstract

Phosphorescent polymer light-emitting diodes (PhPLEDs) have become the subject of intensive investigation due to their promising applications for displays and lighting. This review presents recent progress in single iridium-containing phosphorescent polymers for PhPLEDs according to their different emitting colors. These phosphorescent polymers are further classified as main chain, side chain, and chelating-types based on the manner in which the host and dopant units are connected. The relationship between the polymer structures and electroluminescence properties is the main focus of this review. Finally, some important rules for designing new efficient phosphorescent polymers are discussed.

**Keywords:** phosphorescent polymer light-emitting diodes; iridium(III) complex; triplet emitters

\*Corresponding author. Tel: +82-51-510-2232; Fax: +82-51-516-7421; E-mail address: [dohoonhwang@pusan.ac.kr](mailto:dohoonhwang@pusan.ac.kr) (D.H. Hwang)

Download English Version:

<https://daneshyari.com/en/article/5208079>

Download Persian Version:

<https://daneshyari.com/article/5208079>

[Daneshyari.com](https://daneshyari.com)