



发光学报 2013, 34(6) 681-685 ISSN: 1000-7032 CN: 22-1116/O4

特邀报告

White Organic Light-emitting Diodes with A $Sr_2SiO_4:Eu^{3+}$ Color Conversion Layer

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摘要： Hybrid inorganic/organic white organic light emitting diodes (hybrid-WOLEDs) are fabricated by combining the blue phosphorescent organic light emitting diodes (PHOLEDs) with red $Sr_2SiO_4:Eu^{3+}$ phosphor spin coated as a color conversion layer (CCL) over the other side of glass substrate on the devices. The basic configuration of the PHOLEDs consists a host material, N, N'-dicarbazolyl-3, 5-benzene (mCP) which doped with a blue phosphorescent iridium complexes iridium(III)bis[(4,6-di-fluorophenyl)-pyridinato-N-C2'] (FIrpic) to produce high efficient blue organic light emitting diodes. The hybrid-WOLED shows maximum luminous efficiency of 22.1 cd/A, maximum power efficiency of 11.26 lm/W, external quantum efficiency of 10.2% and CIE coordinates of (0.32, 0.34). Moreover, the output spectra and CIE coordinates of the hybrid-WOLED have a small shift in different driving current density, which demonstrate good color stability.

关键词： white organic light emitting diodes(WOLEDs) color conversion layer(CCL) $Sr_2SiO_4:Eu$ color stability

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收稿日期 2013-04-12 修回日期 2013-05-03 网络版发布日期

基金项目:

Project supported by the National Science Council of the Republic of China(101-2221-E-214-016); the financial support of ISU99-01-06 and the MANALAB at ISU,Taiwan

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