



[Log in / register](#)

SCHEDULED MAINTENANCE



Maintenance work is planned from 09:00 BST to 12:00 BST on Saturday 28th September 2024.

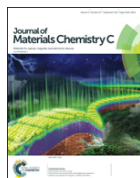
During this time the performance of our website may be affected - searches may run slowly, some pages may be temporarily unavailable, and you may be unable to access content. If this happens, please try refreshing your web browser or try waiting two to three minutes before trying again.

We apologise for any inconvenience this might cause and thank you for your patience.

Issue 33, 2017

[Previous](#)

[Next](#)



From the journal:

Journal of Materials Chemistry C

n-Doping-induced efficient electron-injection for high efficiency inverted organic light-emitting diodes based on thermally activated delayed fluorescence emitter†



Check for updates

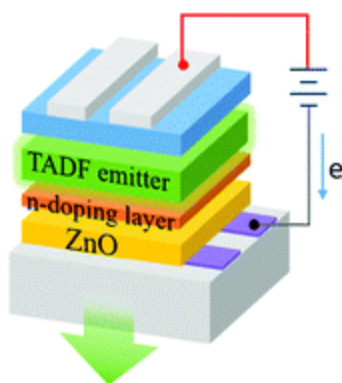
This site uses cookies

This website uses cookies and similar technologies to store and retrieve information about your use of this website. This information helps us to provide, analyse and improve our services, which may include personalised content or advertising. We may share this information with Google and other third parties. Some cookies are necessary for our website to work properly and others are optional. You can review and configure your cookie settings by clicking on 'Do not sell my personal information'.

[Do not sell my personal information](#)

OK

phenanthroline (BPhen) film with cesium carbonate (Cs_2CO_3) as the buffer layer between ZnO and BPhen layer. The n-doped BPhen interlayer shows better electron-transporting properties than undoped BPhen film and reduces the electron-injection barrier from ZnO to BPhen layer. The inverted OLEDs, based on TXO-PhCz emitter incorporating the solution-processed Cs_2CO_3 -doped BPhen film as an interlayer, show a maximum external quantum efficiency of 16.4%, current efficiency of 53.9 cd A^{-1} , and power efficiency of 35.6 lm W^{-1} , which realize unprecedentedly high-efficiency TADF-based inverted OLEDs. These results are competitive with the properties of inverted OLEDs based on phosphorescent emitters, implying that TADF emitters have potential to substitute for phosphors on realizing air-stable and large-area displays.



About

Cited by

Related

Buy this article

£42.50*

* Exclusive of taxes

This article contains 8 page(s)

This site uses cookies

This website uses cookies and similar technologies to store and retrieve information about your use of this website. This information helps us to provide, analyse and improve our services, which may include personalised content or advertising. We may share this information with Google and other third parties. Some cookies are necessary for our website to work properly and others are optional. You can review and configure your cookie settings by clicking on 'Do not sell my personal information'.

Supplementary files

Supplementary information

PDF (1206K)

Article information

<https://doi.org/10.1039/C7TC02406A>

Article type

Paper

Submitted

01 Jun 2017

Accepted

12 Jul 2017

First published

14 Jul 2017

Citation

J. Mater. Chem. C, 2017, **5**, 8400-8407

BibTex



Go

Permissions

[Request permissions](#)

Social activity

This site uses cookies

This website uses cookies and similar technologies to store and retrieve information about your use of this website. This information helps us to provide, analyse and improve our services, which may include personalised content or advertising. We may share this information with Google and other third parties. Some cookies are necessary for our website to work properly and others are optional. You can review and configure your cookie settings by clicking on 'Do not sell my personal information'.

- ☐ Zhiyi Li
- ☐ Yanwei Liu
- ☐ Jianjun Liu
- ☐ Ruifang Wang
- ☐ Pengfei Wang
- ☐ Yukiko Yamada-Takamura
- ☐ Ying Wang

Go

Spotlight

Advertisements

Journals, books & databases



This site uses cookies

This website uses cookies and similar technologies to store and retrieve information about your use of this website. This information helps us to provide, analyse and improve our services, which may include personalised content or advertising. We may share this information with Google and other third parties. Some cookies are necessary for our website to work properly and others are optional. You can review and configure your cookie settings by clicking on 'Do not sell my personal information'.



© Royal Society of Chemistry 2024

Registered charity number: 207890

This website collects cookies to deliver a better user experience. See how this site uses [Cookies](#).

This site uses cookies

This website uses cookies and similar technologies to store and retrieve information about your use of this website. This information helps us to provide, analyse and improve our services, which may include personalised content or advertising. We may share this information with Google and other third parties. Some cookies are necessary for our website to work properly and others are optional. You can review and configure your cookie settings by clicking on 'Do not sell my personal information'.