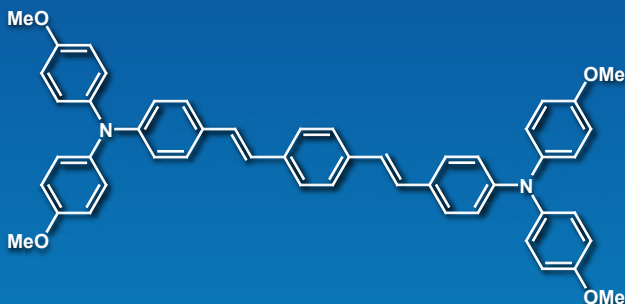


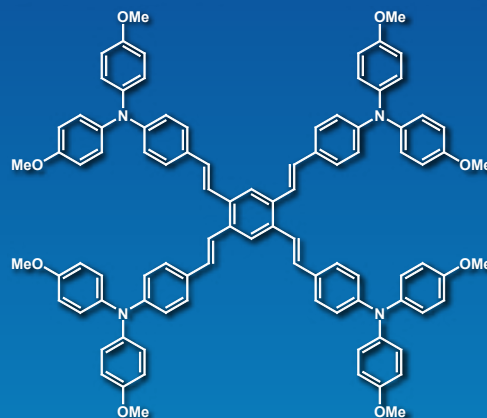
New

Hole Transporting Materials for Stable Perovskite Solar Cells



TOP-HTM-α1
1g / 5g / 25g
[B5672]

TCI unique,
Practical materials



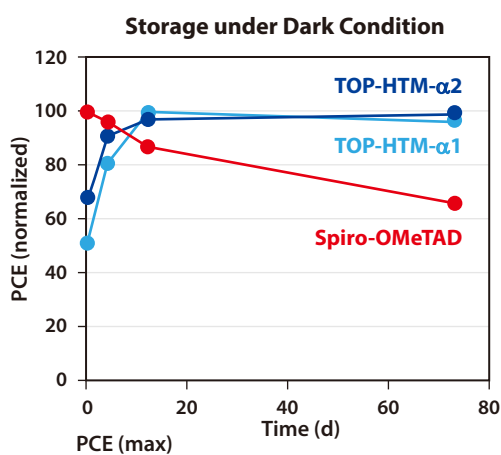
TOP-HTM-α2
1g / 5g / 25g
[T3722]

Advantages

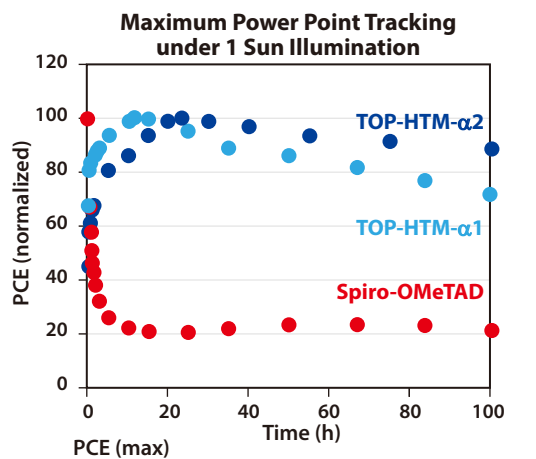
- Realize a highly stable perovskite solar cell with low cost
- Work without dopants nor additives

Applications

Perovskite solar cells based on new HTMs realized superior device stability than that based on doped Spiro-OMeTAD both under dark condition and under 1 sun illumination. (FTO/c-TiO₂/mp-TiO₂/MAPbI₃/HTM/Au)



TOP-HTM-α1 13.6 % (12 d), TOP-HTM-α2 14 % (73 d)
Spiro-OMeTAD (doped) 16.3 % (0 d)



TOP-HTM-α1 11.6 % (12 h), TOP-HTM-α2 11.3 % (23 h)
Spiro-OMeTAD (doped) 12.5 % (0 h)

H. Nishimura, I. Okada, T. Tanabe, A. Wakamiya, Pending Patent Application PCT/JP2019/030162.

For further information please refer to our website at www.TCIchemicals.com.

solar cell

Ordering and Customer Service

TCI AMERICA

Tel : 800-423-8616 / 503-283-1681
Fax : 888-520-1075 / 503-283-1987
E-mail : Sales-US@TCIchemicals.com

TCI EUROPE N.V.

Tel : +32 (0)3 735 07 00
Fax : +32 (0)3 735 07 01
E-mail : Sales-EU@TCIchemicals.com

TCI Deutschland GmbH

Tel : +49 (0)6196 64053-00
Fax : +49 (0)6196 64053-01
E-mail : Sales-DE@TCIchemicals.com

Tokyo Chemical Industry UK Ltd.

Tel : +44 (0)1865 784560
Fax : +44 (0)1865 784561
E-mail : Sales-UK@TCIchemicals.com

TCI Chemicals (India) Pvt. Ltd.

Tel : 1800 425 7889 / 044-2262 0909
Fax : 044-2262 8902
E-mail : Sales-IN@TCIchemicals.com

梯希爱(上海)化成工业发展有限公司

Tel : 800-988-0390 / 021-67121386
Fax : 021-6712-1385
E-mail : Sales-CN@TCIchemicals.com

TOKYO CHEMICAL INDUSTRY CO., LTD.

Tel : +81 (0)3-5640-8878
Fax : +81 (0)3-5640-8902
E-mail : globalbusiness@TCIchemicals.com

Availability, price or specification of the listed products are subject to change without prior notice. Reproduction forbidden without the prior written consent of Tokyo Chemical Industry Co., Ltd.