

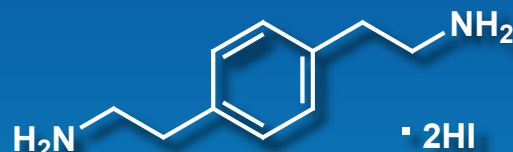
Phenylethylamine Hydroiodides for Surface Treatment of Perovskite Layer



2-Phenylethylamine Hydroiodide
1g / 5g
[P2213]



1,2-Benzenediethanamine Dihydroiodide
1g / 5g
[B6569] **New**



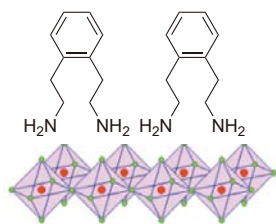
1,4-Benzenediethanamine Dihydroiodide
1g / 5g
[B6570] **New**

Advantages

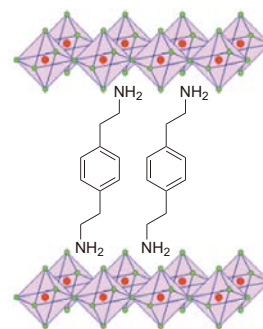
- Improves the stability of solar cell device when used for the surface treatment of perovskite layer ¹⁾
- Available for field effect transistors using Sn-based perovskite ²⁾

Applications

Different structural layers are formed depending on the position of alkyl chains. ¹⁾



Formation of 2D perovskite layer on the surface of 3D perovskite layer



Formation of highly stable Dion-Jacobson 2D perovskite layer

Solar Cell Device Performance

FTO/TiO₂/SnO₂/perovskite/Amine Iodide/Spiro-OMeTAD/Au

perovskite component: PbI₂ : PbBr₂ : FAI : MAI : CsI : MACl = 0.98 : 0.02 : 0.81 : 0.04 : 0.05 : 0.20

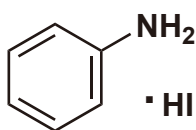
Amine	J _{SC} (mA/cm ²)	V _{OC} (V)	FF	PCE (%)	Stability (1100 h)
P2213	24.49	1.135	0.790	21.94	>60%
B6569	24.75	1.157	0.835	23.92	>90%
B6570	24.34	1.127	0.770	21.09	Not Reported

References 1) C. Liu, M. K. Nazeeruddin, *et al.*, *Nat. Commun.* **2021**, 12, 6394. <https://doi.org/10.1038/s41467-021-26754-2>
2) H. Zhu, A. Liu, Y. Noh, *Nat. Electron.* **2023**, 6, 650. <https://doi.org/10.1038/s41928-023-01019-6>

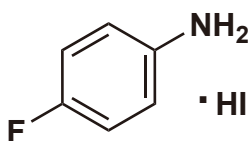
Phenylethylamine Hydroiodides for Surface Treatment of Perovskite Layer

Related Products

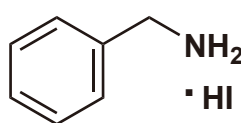
Amine Hydroiodides Containing Aromatic Ring



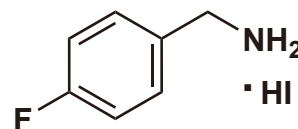
Aniline Hydroiodide
1g / 5g
[A2778]



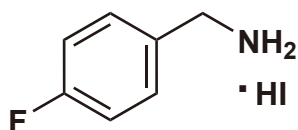
4-Fluoroaniline Hydroiodide
1g / 5g
[F1273]



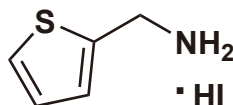
Benzylamine Hydroiodide
(Low water content)
1g / 5g
[B4566]



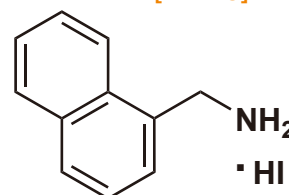
4-Fluorobenzylamine Hydroiodide
1g / 5g
[F1228]



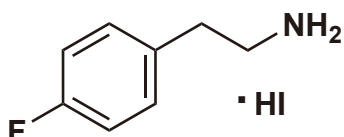
4-(Trifluoromethyl)-benzylamine Hydroiodide
1g / 5g
[T3838]



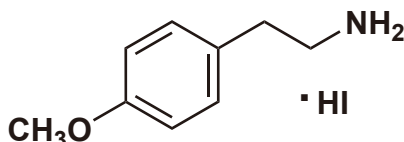
Thiophen-2-ylmethanamine Hydroiodide
1g / 5g
[A3505]



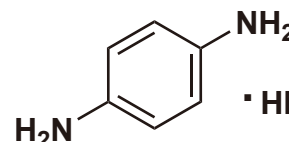
1-Naphthalenemethanamine Hydroiodide
1g / 5g
[N1276]



2-(4-Fluorophenyl)-ethylamine Hydroiodide
1g / 5g
[F1203]



2-(4-Methoxyphenyl)ethylamine Hydroiodide
1g / 5g
[B6570]



1,4-Phenylenediamine Dihydroiodide
1g
[P2389]

Other Perovskite Related Products

Formamidine Hydroiodide (= FAI) (99.99%, trace metals basis) [for Perovskite precursor]	1g / 5g / 25g	[F1263]
Methylamine Hydroiodide (= MAI) (Low water content)	1g / 5g / 25g / 100g	[M2556]
Spiro-OMeTAD	1g / 5g	[T3672]
Lithium Bis(trifluoromethanesulfonyl)imide (= LiTFSI)	25g / 250g	[B2542]
4-tert-Butylpyridine	5g / 25g	[B0388]
Lead(II) Iodide (99.99%, trace metals basis) [for Perovskite precursor]	1g / 5g / 25g / 100g / 1kg	[L0279]
Lead(II) Bromide [for Perovskite precursor]	1g / 5g / 25g / 100g	[L0288]
Lead(II) Chloride (purified by sublimation) [for Perovskite precursor]	1g / 5g	[L0291]
Lead(II) Chloride [for Perovskite precursor]	1g / 5g / 25g	[L0292]

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