

New

MATERIALS



Perovskite Precursor Lead Acetate Anhydrous



[L0315]

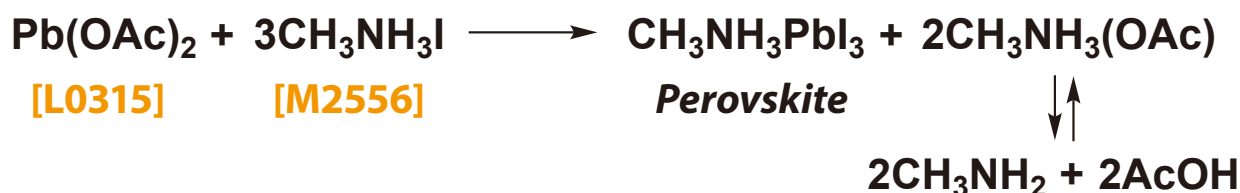
Water < 100 ppm

Advantages

- Enables fast crystal growth of perovskites
- Provides ultrasmooth and pin-hole free perovskite film
- Fabricates perovskite device under anhydrous conditions
- Low water content (Water < 100 ppm)

Application for Perovskite Solar Cells (PSC)

Proposed formation mechanism of $\text{CH}_3\text{NH}_3\text{PbI}_3$ from Pb(OAc)_2 ¹⁾



PSC research data based on lead acetate precursor

1) PCE >10%: E. Mas-Marzá, I. Mora-Sero, *et al.*, *J. Mater. Chem. A* **2015**, 3, 9194.

2) PCE >17%: T. Singh, T. Miyasaka, *Chem. Commun.* **2016**, 52, 4784.

3) PCE 14%: H. J. Snaith, *et al.*, *Nat. Commun.* **2015**, 6, 6142.

4) PCE >18%: T. P. Russell, H. J. Snaith, R. Zhu, Q. Gong, *et al.*, *Adv. Funct. Mater.* **2016**, 26, 3508.

5) PCE >13%: W. Qiu, H. J. Snaith, P. Heremans, *et al.*, *Energy Environ. Sci.* **2016**, 9, 484.

6) PCE >14%: M.-F. Lo, C.-S. Lee, *et al.*, *ACS Appl. Mater. Interfaces* **2015**, 7, 23110.

Lead(II) Acetate [for Perovskite precursor]

1g / 5g / 25g [L0315]

Related Products

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 [L0288]

Lead(II) Chloride (purified by sublimation) [for Perovskite precursor]

1g / 5g [L0291]

Lead(II) Chloride [for Perovskite precursor]

1g / 5g / 25g [L0292]

Methylamine Hydroiodide (Water < 100 ppm) (= MAI)

1g / 5g / 25g / 100g [M2556]

Formamidinium Hydroiodide (Water < 100 ppm) (= FAI)

1g / 5g / 25g [F0974]

Perovskite Precursor: Lead Acetate Anhydrous

Perovskite Precursors

Cation \ Anion	Iodide	Bromide	Chloride
Lead	L0279	L0288	L0291, L0292
Cesium	C2205	C2202	C2203
Bismuth	B5787	-	B3546
Methylammonium	M2556	M2589	M0138
Formamidinium	F0974	F0973	F0103
Acetamidinium	A2902	-	A0008
Guanidinium	G0450	G0449	G0162
Ethylammonium	E1045	E0056	E0205
Propylammonium	P2212	P2502	P0522
Isopropylammonium	I0934	I1041	I0166
Butylammonium	B4433	B5186	B0710
Isobutylammonium	I0935	I1007	I0096
<i>tert</i> -Butylammonium	B4434	B5187	-
Dimethylammonium	D4555	D5092	D0644
Diethylammonium	D4643	D4667	D0468
Imidazolium	I0970	I1006	-
Phenylammonium	A2778	A2985	-
Benzylammonium	B4566	B5185	B0407
2-Phenylethylammonium	P2213	P2388	P0086
5-Aminovaleric Acid	A2984	A3094	A0436

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perovskite



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