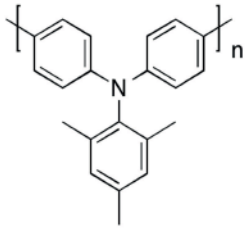
SOLARIS CHEM

OPV - SOLAR CELLS

POLYRIUM™ PTAA

Polymer for opto-electronic applications



PTAA (p-type)

SOL2426

Description

Poly[bis(4-phenyl)(2,4,6-trimethylphenyl)amine]-end capped PTAA, an highly performant hole-transporting, electron-blocking semiconducting polymer that improves open-circuit voltage (Voc), fill factor (FF) and overall performances of various solar cell systems.

PTAA as HTL in perovskite solar cells achieving high power conversion efficiencies (PCE). PTAA displays superior mechanical robustness in terms of cohesion with a cohesion energy (Gc) coefficient over 17 J m−2, the highest reported Gc value among HTL materials.

Various Mw ranges and specific Mw Polyrium batches available to fit your formulations, device fabrication processes and methods (Mw available from 5 kDa to 1000 kDa).

Buy now

Polyrium batches

The Polyrium Difference by Solaris

POLYRIUM™ - PTAA **Advantages**:

- Various Mw ranges available (5 kDa to 1000 kDa) to fit your formulations, device fabrication processes and methods (Custom Mw available).
- High Molecular weight (Mw), soluble and processable PTAA [1].
- **End-capped** to limit any side photo-reaction during device operation.
- Fully scavenged using our proprietary scavenging and cleaning methods to yield ultra low metal content, pale yellow powders and fibres for longer terms device stability.
- High film strength without sacrifying performances and Power Conversion Efficiency (PCE) [2].
- Available on the kilo level and ready for pilot plant and commercial device fabrication.
- Specific Polyrium batches with precise Mw and pdi available (Mw Polyrium batches).

Green chemistry

Environmentally friendly

SUSTAINABILITY is at the core of what we do and our engine for growth, which is why we prioritize the use of GREEN CHEMISTRY, avoid wastes, recover and recycle solvents and materials as much as possible and use renewable hydro-electrical energy to power our operations.

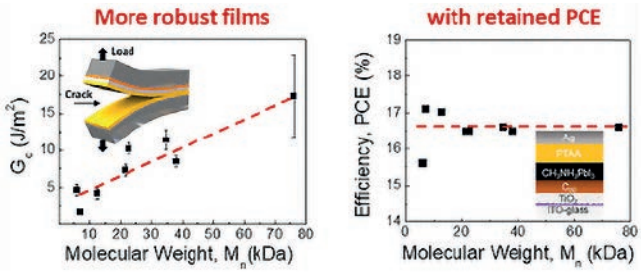
[1] Solubility may vary depending on Mw, processing temperature and solvents used.

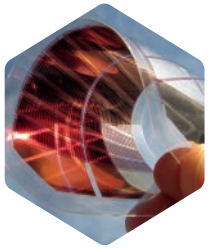
POLYRIUM™ by Solaris Chem Inc.

Available at **g level** (Tech centers and universities) and Available at **kg level** (for industrial developments).

References

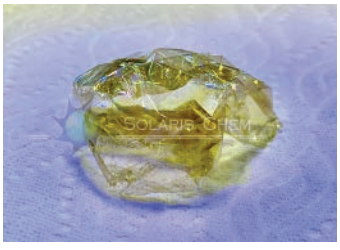
[1] [2] "**Hole-Transport Layer Molecular Weight and Doping Effectson Perovskite Solar Cell Efficiency and Mechanical Behavior**".
Inhwa Lee, Nicholas Rolston, Pierre-Louis Brunner, Reinhold H. Dauskardt*
Appl. Mater. Interfaces 2019, 11, 26, 23757-23764





Flexible Solar Cell incorporating PTAA

High Mw PTAA fibers



PTAA self supported thin film

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