

POLYRIUM™ PTAA

Polymer for opto-electronic applications

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 (V_{oc}), 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 (G_c) coefficient over 17 J m^{-2} , the highest reported G_c value among HTL materials.

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 sacrificing 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).

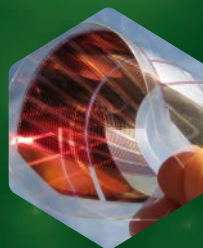
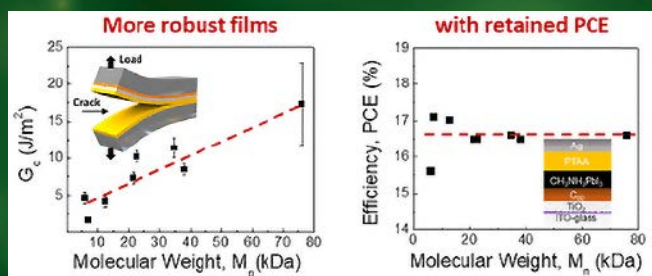
[1] Solubility may vary depending on Mw, processing temperature and solvents used.

POLYRIUM™ by Solaris Chem Inc.

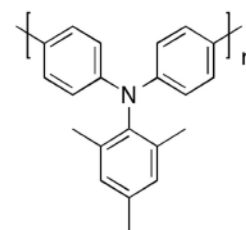
References

[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



PTAA (p-type)

SOL2426

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



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.



High Mw PTAA fibers



PTAA self supported thin film

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