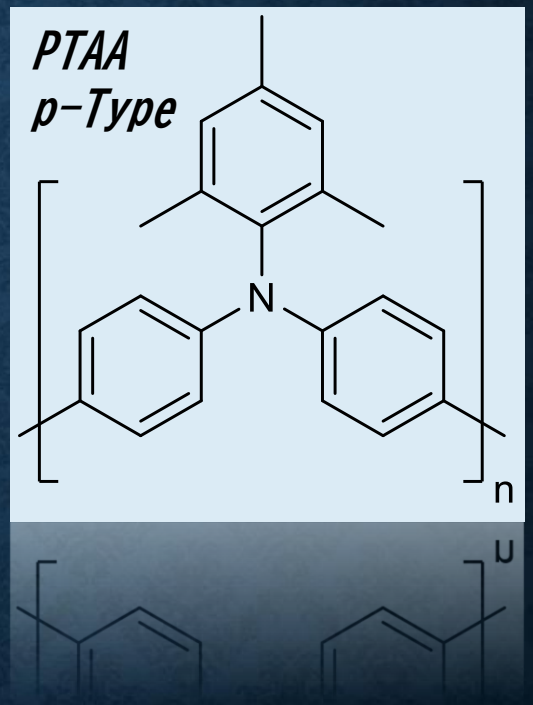
Cost Effective and High Performance PTAA for Hole Transporter in Perovskite Solar Cell

Advantages

- Extremely Low Cost
- High Hole Mobility
- Mass production Available



Originarity

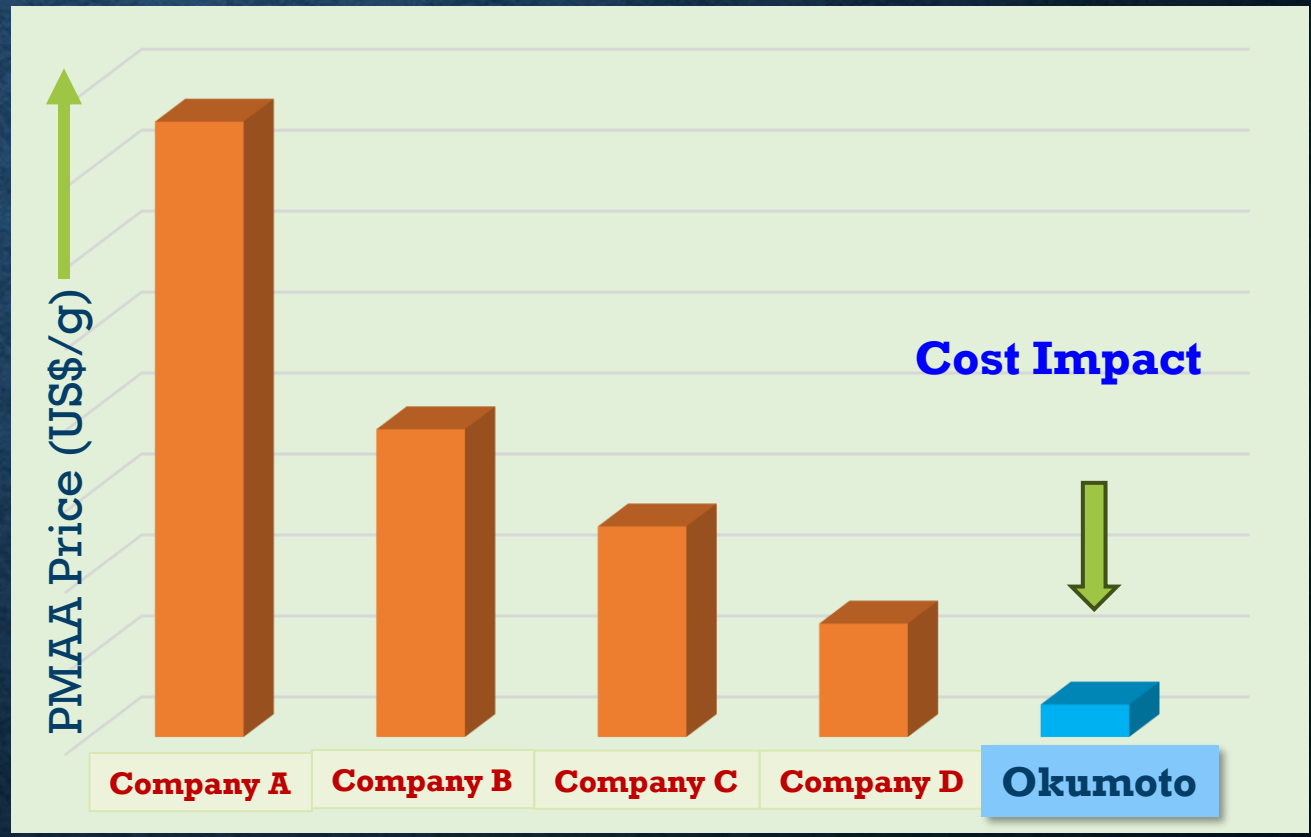
The synthestic process is developed in Okumoto Laboratory.

1st Advantage: Extremely Low Cost

Our PTAA can be produced at an extremely low cost with our original synthetic process.

Our PTAA can replace your hole transporter in your perovskite solar cell process, which will reduce the total cost of your solar cell.

Price Comparison



2nd Advantage : High Hole Mobility

Hole mobility of our PTAA is twice higher than that of conventional one.

This property is expected to improve the PSC performance.

Supplier	property	Mobility*
Company A	Current standard: Mn=6,400 Mw/Mn=1.56	0.6 x 10^{-3} cm^2/Vs
Okumoto Labo	By our new synthesis and highly purified: Mn=8,400 Mw/Mn = 1.37	1.3 x 10^{-3} cm^2/Vs

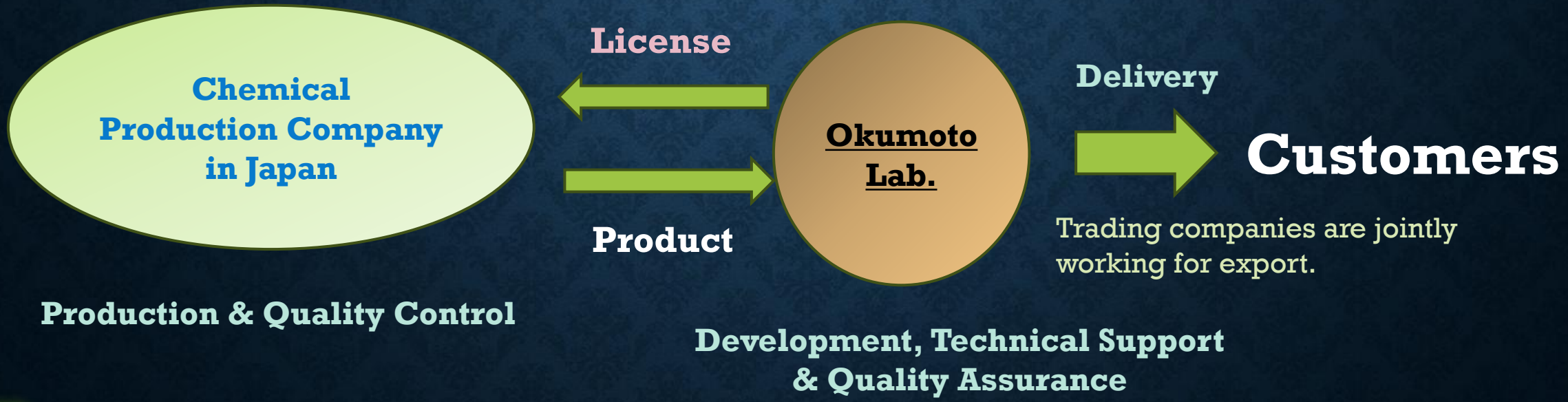
***The mobility is measured by SCLC technique.**

3rd Advantage : Mass production Available

Okumoto PTAA is ready for mass production. We will quate you a price.

Sample Supply: 1.0g ~

For Mass Production: 1.0 kg ~



Perovskite Solar Cell Data

Okumoto PTAA shows better performance in Perovskite Solar Cell .

	Jsc (mA/cm2)	Voc V	FF	PCE
Okumoto PTAA	20.86	1.097	0.735	16.83%
Company B PTAA	20.47	1.072	0.717	15.62%

Device Structure）

p-i-n device： ITO / PTAA / Perovskite / C60 BCP / Ag

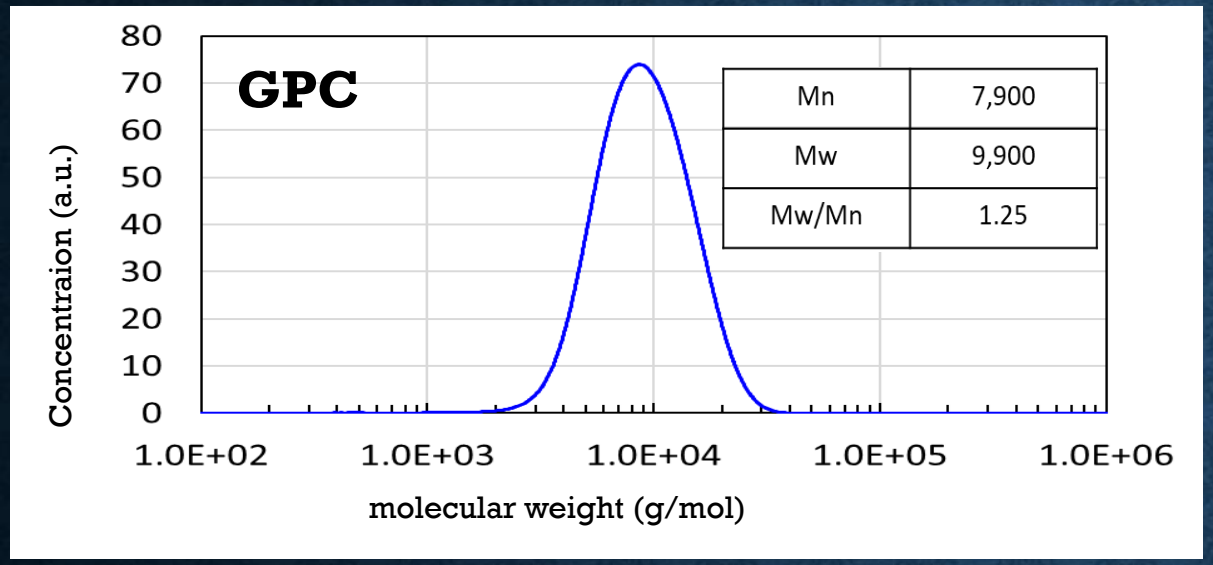
PTAA Process Condition）

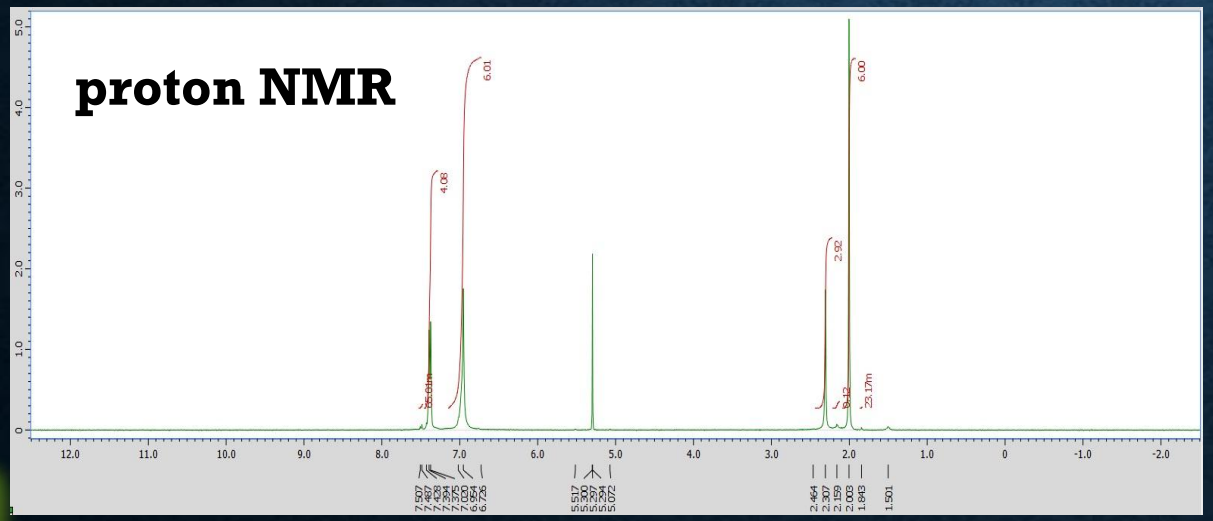
PTAA is dissolved in chlorobenzene (2.2mg/mL) and spin-coated with 6000rpm for 30 sec.

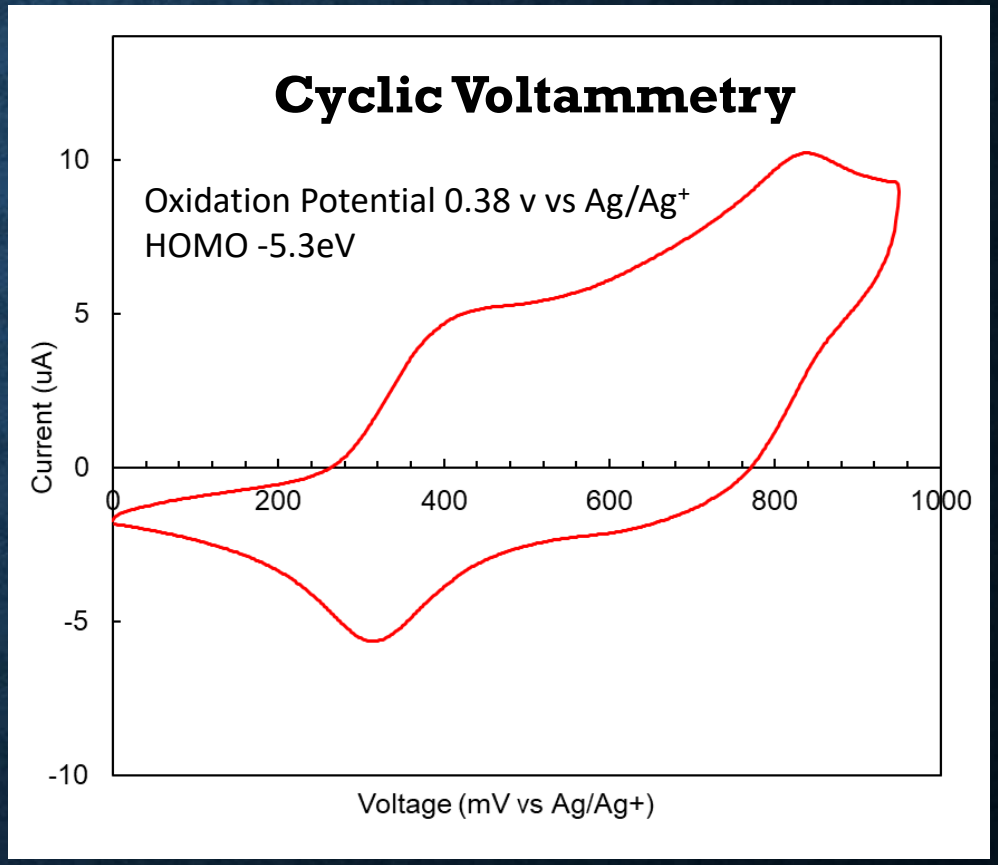
The obtained film is annealed at 100 °C for 10 min.

Supplementary Material Data

These data are always accompanied by the product as the LOT warranty.







Okumoto Laboratory, Kyoto, Japan

History

April 2014	Founded in Moriguchi in Osaka
July 2014	Moved to Seika in Kyoto
April 2016	Incorporated
July 2017	Moved in Keihanna Plaza (4th floor to 2nd floor)
March 2019	Non-debt and Surplus management from 2015

Profile

Firm Name	Okumoto Laboratory Co., LTd.
Found	April 2014
Capital	8.5 Million Yen
President	Kenji Okumoto
Staff	3
Business	Service on Research of Organic Semiconductor Material and Device
Philosophy	Challenge to the World First and Useful Research Work
Address	Keihanna Plaza, 1-7 Hikari-dai, Seika-cho, Souraku-gun, Kyoto

Key Businesses

1) Organic Material Supply
2) Evaluation of Materials
3) Test Device Fabrication and Evaluation
4) Technology survey

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