

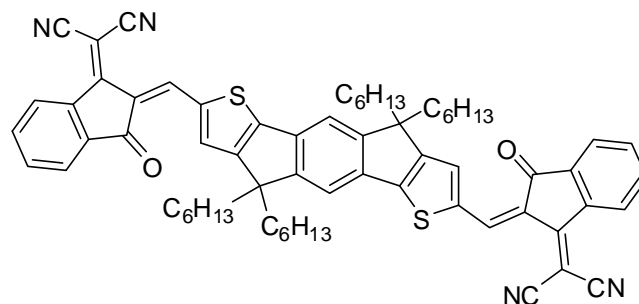


A Facile Planar Fused-Ring Electron Acceptor for As-Cast Polymer Solar Cells with 8.71% Efficiency

Product Specifications

LT-S9279 IDIC

Name.	2,2'-[(4,4,9,9-tetrahexyl-4,9-dihydro- <i>s</i> -indaceno[1,2- <i>b</i> :5,6- <i>b'</i>]dithiophene-2,7-diyl)bis[methylidyne(3-oxo-1 <i>H</i> -indene-2,1(3 <i>H</i>)-diylidene)]]bis-Propanedinitrile
CAS No.	1883441-92-6
Formula	C ₆₆ H ₆₆ N ₄ O ₂ S ₂
Molecular Weight	1011.39 g/mole
Absorption	664 nm (in CH ₂ Cl ₂)
HOMO/LUMO	-5.69 eV/ -3.91 eV



* Reference: *J. Am. Chem. Soc.* **2016**, *138*, 2973-2976

Features

- A planar fused-ring electron acceptor (IDIC) based on indacenodithiophene is designed and It shows strong absorption in 500-800 nm with extinction coefficient of up to $2.4 \times 10^5 \text{ M}^{-1} \text{ cm}^{-1}$ and high electron mobility of $1.1 \times 10^{-3} \text{ cm}^2 \text{ V}^{-1} \text{ S}^{-1}$. The as-cast polymer solar cells (PSCs) based on IDIC without additional treatments exhibit power conversion efficiencies (PCEs) of up to 8.71%.

Device Application

The Best Device:

ITO/ ZnO/ PDBT-T1:IDIC/ MoO_x/ Ag

MoO₃ = LT-E003

Materials are used by qualified for testing and research only, there are not guaranteed in patent contention by customer use.

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