Indoline Dyes for High Efficient Dye-Sensitized Solar-Cell (DSSC)

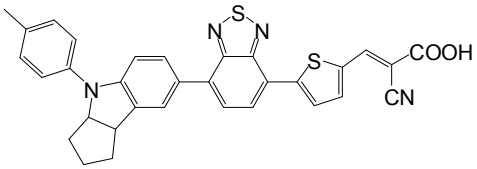
A Dye-Sensitized Solar-Cell (DSSC, DSC or DYSC) is a low-cost solar cell belonging to the group of thin film solar cells. It is based on a semiconductor formed between a photo-sensitized anode and an electrolyte, a photoelectrochemical system.

Some new materials are list as below.

Product Specifications

LT-S9166 WS-2

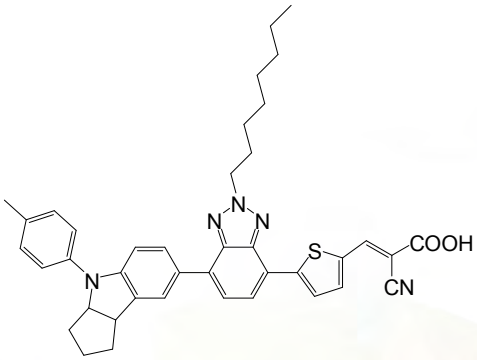
(*E*)-2-cyano-3-(5-(7-(4-(*p*-tolyl)-1,2,3,3a,4,8*b*-hexahydrocyclopenta[*b*]indol-7-yl)benzo[*c*][1,2,5]thiadiazol-4-yl)thiophen-2-yl)acrylic acid



CAS No.	1263863-11-1
Grade	> 99% (HPLC)
Formula	$C_{32}H_{24}N_4O_2S_2$
Molecular Weight	560.6900 g/mole
UV	546 nm in CH_2Cl_2
Reference :	*Adv. Funct. Mater. 2011, 21, 756; Energy Environ. Sci., 2012, 5, 8261.*
DSSCs performance :	J_{sc} = 17.93 mA cm^{-2}, V_{oc} = 661 mV, *FF* = 0.74, η = 8.90% in iodine electrolyte

LT-S9167 WS-5

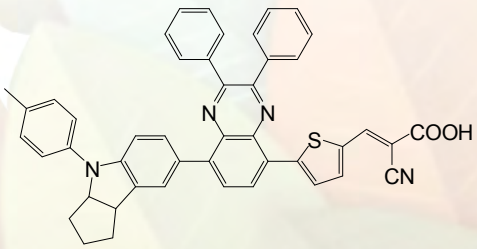
(*E*)-2-cyano-3-(5-(2-octyl-7-(4-(*p*-tolyl)-1,2,3,3a,4,8*b*-hexahydrocyclopenta[*b*]indol-7-yl)-2*H*-benzo[*d*][1,2,3]triazol-4-yl)thiophen-2-yl)acrylic acid



CAS No.	1334739-85-3
Grade	> 99% (HPLC)
Formula	$C_{40}H_{41}N_5O_2S$
Molecular Weight	655.8610 g/mole
UV	496 nm in CH_2Cl_2
Reference :	*Chem. Mater. 2011, 23, 4394; ACS Appl. Mater. Interfaces 2014, 6, 14621*
DSSCs performance :	J_{sc} = 13.18 mA cm^{-2}, V_{oc} = 780 mV, *FF* = 0.78, η = 8.02% in iodine electrolyte (high photovoltage)

LT-S9168 IQ-4

(*E*)-2-cyano-3-(5-(2,3-diphenyl-8-(4-(*p*-tolyl)-1,2,3,3a,4,8*b*-hexahydrocyclopenta[*b*]indol-7-yl)quinoxalin-5-yl)thiophen-2-yl)acrylic acid



CAS No.	1440205-23-1
Grade	> 99% (HPLC)
Formula	$C_{46}H_{34}N_4O_2S$
Molecular Weight	706.8640 g/mole
UV	529 nm in CH_2Cl_2
Reference :	*ACS Appl. Mater. Interfaces 2013, 5, 4986; J. Am. Chem. Soc. 2014, 136, 5722.*
DSSCs performance :	J_{sc} = 17.55 mA cm^{-2}, V_{oc} = 740 mV, *FF* = 0.71, η = 9.24% in iodine electrolyte

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