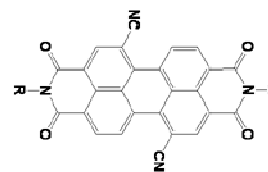


# ActivInk™ N1400



## Materials Properties

<b>Chemical Structure:</b>	PDIR-CN2
<b>Physical Form:</b>	Red crystalline solid
<b>Purity:</b>	> 99.5%
<b>Melting Point:</b>	300°C
<b>Solubility:</b>	Chloroform, dichlorobenzene, anisole, (heating to 80°C: toluene, o-xylene, 1,4-dioxane)
<b>Can Publish Results:</b>	Yes



## Electronic Properties

<b>Optical Absorption (<math>\lambda</math> max.):</b>	530 nm
<b>HOMO / LUMO (by CV.):</b>	6.4 / 4.3
<b>Abs. Coefficient:</b>	$1.0 \times 10^5$
<b>Bandgap:</b>	2.1eV

## Typical Device Data

### Carrier Mobility:

Deposition Method	Mobility	Device Stack
Vapor	0.1 – 0.2 $\text{cm}^2/\text{Vs}$	TCBG Si / $\text{SiO}_2$ -OTS / Au / L = 50 $\mu\text{m}$
Spin-Coat	0.1 – 0.4 $\text{cm}^2/\text{Vs}$	TCBG Si / $\text{SiO}_2$ -OTS / Au / L = 50 $\mu\text{m}$
Spin-Coat	0.02 – 0.05 $\text{cm}^2/\text{Vs}$	BCTG Glass / Au / dielec. / Au / L = 50 $\mu\text{m}$

<b>Turn-on Voltage:</b>	-10 – 0 V
<b>On/Off Ratio:</b>	$1.0 \times 10^{4-5}$
<b>Device Shelf Life:</b>	Excellent
<b>Recommended Contact Type(s):</b>	Au, but will work with others.
<b>Recommended Dielectric(s):</b>	ActivInk™ D2500 (TG arch.)

## FET Transfer Characteristic

Spin-Coat

