Highly-purified \textit{n}-Type Semiconductor Material \textit{F}_{16}\textit{CuPc}

TCI’s unique purification technology produces highly-purified semiconductor materials. We will ensure a stable supply of \textit{F}_{16}\textit{CuPc} being used as an organic semiconductor with high electron mobility.

The FET device made using our \textit{F}_{16}\textit{CuPc} as an \textit{n}-type semiconductor shows good characteristics.

\begin{align*}
I_{DS} & = \frac{1}{2} \left( \frac{V_{GS}}{V_{TH}} \right) \left( V_{DS} - \frac{1}{2} \cdot V_{TH} \right) \quad \text{for} \quad V_{GS} > V_{TH} \\
I_{DS} & = 0 \quad \text{for} \quad V_{GS} < V_{TH} \\
I_{DS} & = 0 \quad \text{for} \quad V_{GS} = V_{TH}
\end{align*}

\textbf{Transistor Characteristics}

The characteristics above are presented by Dr. Y. Watanabe at Chiba University, Japan.

\textbf{H1194 \textit{F}_{16}\textit{CuPc} (purified by sublimation)}

100mg / 1g

If you require larger quantities, please contact us.

TCI also offers sublimed-grade \textit{p}-type semiconductor materials with high hole mobility: Pentacene (Product No. P0030) and 2,7-diphenyl[1]-benzothieno[3,2-b][1]benzothiophene (Product No. D3526) that indicate good electron mobility as \textit{p}-type semiconductor materials.

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TCI also offers purified-grade \textit{p}-type semiconductor materials with high hole mobility: Pentacene (Product No. P0030) and 2,7-diphenyl[1]-benzothieno[3,2-b][1]benzothiophene (Product No. D3526) that indicate good electron mobility as \textit{p}-type semiconductor materials.