

Isostructural Organic Junctions

Author(s): **IBM TDB**

Engler, EM

Grant, PM

IP.com number: **IPCOM000088937D**

Original Publication Date: **August 1, 1977**

Original Disclosure Information: **TDB 08-77 p1170-1171**

IP.com Electronic Publication: **March 4, 2005**

IP.com, Inc. is the world's leader in defensive publications. The largest and most innovative companies publish their technical disclosures into the IP.com Prior Art Database. Disclosures can be published in any language, and they are searchable in those languages online. Unique identifiers indicate documents containing chemical structures as well as publications open for comment in the IP Discussion Forum. Disclosures are published every day online and also appear in the printed IP.com Journal. The IP.com Prior Art Database is freely available to search by patent examiners throughout the world.

Client may copy any content obtained through the site for Client's individual, noncommercial internal use only. Client agrees not to otherwise copy, change, upload, transmit, sell, publish, commercially exploit, modify, create derivative works or distribute any content available through the site.

Note: This is a pdf rendering of the actual disclosure. To access the notarized disclosure package containing an exact copy of the publication in its original format as well as any attached files, please download the full document from the IP.com Prior Art Database at: <http://www.ip.com/pubview/IPCOM000088937D>

Isostructural Organic Junctions

Semiconducting and metallic isostructural heterojunctions between organic materials possessing homomorphic crystal structures are useful in certain applications. A specific example that has been prepared is the junction formed between the charge transfer salts (TTF) (TCNQ) and (TSeF) (TCNQ) where

Other examples of organic junction materials are (1) the oxygen analogs of TTF and TSeF and (2) the TTF halides and TSeF halides which will form charge transfer salts with TCNQ.

The hexamethylene analogs of (TTF) (TCNQ) and (TSeF) (TCNQ) may also be used.

Other examples would include charge transfer salts such as hexamethylene analogs of (TTF) (TCNQ) and (TSeF) (TCNQ).

The electrical properties of these junctions may be varied by the use of dopants. For example, (TTF) (TCNQ) or (TSeF) (TCNQ) may be doped with the acceptor methyl (TCNQ). A variety of dopants may be used.

Other charge transfer salts may include the acceptor (TNAP) or substituted (TCNQ) derivatives, such as DMTCNQ, where

Other donor molecules such as TTT and TSeT, may be used in place of TTF and TSeF, where

