An organic thyristor

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An organic salt that can be switched between two different conducting states is reported in September in the journal *Nature*.

One striking manifestation of this effect, described by Ichiro Terasaki and colleagues (Waseda University, Tokyo, Japan), is to achieve direct-to-alternating current conversion phenomena in a bulk single crystal - the team generate an alternating current of 40 hertz when a small, static direct-current voltage is applied to the crystal.

The behaviour of this salt is characteristic of that of a class of electronic device called a thyristor, which are widely used for the smooth control of power in a variety of applications, such as motors and refrigerators.

But unlike conventional thyristors, which need to be engineered from a series of diodes, the present material exhibits thyristor behaviour as a bulk property.

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