



## Bipyrazole Organic Crystals

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- Researchers from the Indian Institute of Science, Education and Research (IISER) Kolkata, teaming up with IIT Kharagpur, have developed piezoelectric molecular crystals that **repair themselves from mechanical damages without need for any external intervention.**
- Piezoelectric crystals called bipyrazole organic crystals, are **a class of materials that generate electricity when it undergoes a mechanical impact.** The molecules recombine following mechanical fracture without any external intervention, autonomously self-healing in milliseconds with crystallographic precision.
- Devices that we use daily often break down due to mechanical damage, forcing us either to repair or replace them. This decreases the life of the equipment and increases maintenance costs. In many cases, like in space crafts, human intervention for restoration is not possible.
- Researchers used a custom-designed state-of-the-art polarization microscopic system to probe and quantify the perfection of the piezoelectric organic crystals. **These materials with perfect internal arrangement of molecules or ions are called 'crystals'**, which are abundant in nature.

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श्री अखिल मूर्ति के निर्देशन में

# सामान्य अध्ययन फाउंडेशन

## ऑनलाइन लाइव कोर्स

(प्रिलिम्स + मेन्स)

**कक्षाएँ आरंभ : 25 अगस्त 2021**

**समय : 6:30 PM – 9:00 PM**

**कोर्स की अवधि : 15 महीने**

**एडमिशन आरंभ**

**शुल्क - 75,000**

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