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IIT-D develops catalytic technology for sustainable production of chiral APIs

07 October 2021 | News

The research will play a crucial role in decreasing the country's dependence on the import of APIs

India is heavily dependent on importing (~85%) Active Pharmaceutical Ingredients (APIs), and a significant proportion of those APIs are chiral molecules, which are essential building blocks to produce pharmaceuticals, agrochemicals and biologically active compounds.

A research group at the Indian Institute of Technology Delhi (IIT-D) has developed a catalytic technology for the sustainable and economical synthesis of chiral molecules. The Science and Engineering Research Board (SERB), a statutory body of the Department of Science and Technology (DST), Government of India, has funded this research work.

The research team has developed a Metal-Organic Frameworks (MOFs) based catalytic technology using inexpensive natural feedstocks and abundant metals for the sustainable and economical synthesis of enantiomerically pure chiral molecules.

"The developed catalytic technology may play a crucial role in decreasing the country's dependence on the import of the Active Pharmaceutical Ingredients, which also means lowering of the input cost for the industry that would encourage it to pass on the benefit to the society," said Prof. Kuntal Manna, Chemistry Dept., IIT Delhi.