



National Award for Recycling Carbon Technology

Why in News

A Bangalore based **startup** has received the [National Award 2021](#) from **Technology Development Board (TDB)** for developing a commercial solution **for conversion of carbon dioxide (CO₂) to chemicals and fuels.**

- The startup has received funding under the **Nano Mission.**

Key Points

▪ About:

- The startup **developed efficient catalysts and methodologies** for the **conversion of carbon dioxide (CO₂) to methanol and other chemicals.**
- It has led to **improvisation of process engineering** to enhance the production of chemicals and fuels from anthropogenic CO₂ generated from various sources including coal and natural gas power generation sectors, steel industry, cement industry, and chemical industries.
- It has integrated multiple components involved in the **CCUS (Carbon Capture, Utilization, and Sequestration)** to develop a complete solution for the environmental issues due to global warming.
- The **Recycling Carbon Technology** will be transferred to **Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR)**, an autonomous institute of the [Department of Science and Technology.](#)

▪ [Carbon Capture, Utilization and Sequestration \(CCUS\):](#)

- It is a process that **captures carbon dioxide emissions from sources** like coal-fired power plants and **either reuses or stores it** so it will **not enter the atmosphere.**
- Carbon dioxide **storage in geologic formations** includes oil and gas reservoirs, unmineable coal seams and deep saline reservoirs - structures that have stored crude oil, natural gas, brine and carbon dioxide over millions of years.

Technology Development Board

- TDB is a **statutory body** established by the Technology Development Board Act, 1995.
- It was established in 1996 and functions under the **Department of Science of Technology.**
- It **provides financial assistance to companies** working for commercialization of indigenous technologies and adaptation of imported technologies for domestic applications.
- As part of [National Technology Day \(11th May\)](#), the TDB **presents the National Awards**, to industrial concerns who have successfully commercialized an indigenous technology.

Nano Mission

- The Government of India launched the [Nano Mission](#) in 2007 as an "umbrella capacity-building programme".
- It is being implemented by the **Department of Science and Technology (DST)** under the

[Source: PIB](#)

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