



विज्ञान एवं प्रौद्योगिकी विभाग DEPARTMENT OF **SCIENCE & TECHNOLOGY**



PENDING

(IN202411005857) A multi-stacked device for generating electricity

NEED

A growing need for more efficient energy generation methods is leading to exploration of multi-stacked devices. Current energy production systems are often bulky and inefficient. What if electricity generation could become more compact and scalable?

TECHNOLOGY OVERVIEW

This multi-stacked device for electricity generation leverages electrodes and fuel/electrolytes within chambers to generate power. Its compact design, combined with the use of graphene-polylactic acid (PLA) filaments and stacked chambers, enhances energy density and scalability.

MARKET ANALYSIS

The global fuel cell market is projected to grow at a CAGR of 25.3% from 2023 to 2033, driven by the demand for sustainable energy solutions and growing adoption in transport, stationary, and portable applications. [Source: MarketWatch, 2023]

Target Industries

Renewable Energy, Power Generation, Portable Energy Solutions. , Energy storage solution providers, renewable energy developers, fuel cell technology developers, manufacturers of compact energy generation units.

TECHNOLOGY KEY FEATURES

Compact, scalable multi-chamber design, efficient energy generation, use of graphene-PLA filaments, stacked configuration for higher energy density, customizable for various fuel/electrolyte combinations.

AT A GLANCE

 SDG 7 (Affordable and Clean Energy), SDG 9 (Industry, Innovation, and Infrastructure), SDG 13 (Climate Action)

Read more here

Technology is available for licensing/ co-development. Reach out to Prof. Deepak Chitkara, Coordinator, BITS Technology Enabling Centre, BITS Pilani Contact Details: tec.bits@pilani.bits-pilani.ac.in, 91 1596-255913

