

Hyderabad | Mumbai of Eminence



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



PENDING

(IN2O2311058896) Synthesis of fluorescent vinylogous amino cyano aryls



### NEED

Synthesis of luminescent materials with broad emission ranges is complex and requires expensive catalysts. A simpler, more cost-effective method is needed to produce high-quality compounds for use in advanced applications like optoelectronics and sensing.

#### MARKET ANALYSIS

The global market for luminescent materials is projected to grow at a CAGR of 8.2% through 2033, driven by increasing demand in LED lighting, displays, and sensors (source: Market Research Future, 2023).

# **TECHNOLOGY OVERVIEW**

This invention offers a novel method for synthesizing vinylogous cyano aminoaryls (VinCAs) using a simplified process. By utilizing electron-donating and electron-accepting groups, the method creates luminescent materials with broad emission ranges. The process avoids costly catalysts, enabling efficient production.

#### **Target Industries**

Optoelectronics, sensing technologies, material science. , Optoelectronic manufacturers, sensor technology developers, material suppliers, and R&D firms in photonic devices and displays.

# **TECHNOLOGY KEY FEATURES**

Simple, cost-effective synthesis method for luminescent VinCAs; broad emission range; no expensive catalysts; suitable for optoelectronic and sensing applications; efficient reaction conditions with minimal steps.

# AT A GLANCE

 SDG 9 (Industry, Innovation, and Infrastructure), SDG 12 (Responsible Consumption and Production)

#### <u>Read more here</u>

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

