

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202511043072 A

(19) INDIA

(22) Date of filing of Application :03/05/2025

(43) Publication Date : 23/05/2025

(54) Title of the invention : A PHOTO-ACTIVATED COATING APPLICATION APPARATUS FOR SMART WINDOWS

(51) International classification :C23C0014560000, B05C0005020000, B05D0003060000, C23C0016540000, B41J0002160000

(86) International Application No :NA  
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA  
Filing Date :NA

(62) Divisional to Application Number :NA  
Filing Date :NA

(71)Name of Applicant :

**1)NOIDA INSTITUTE OF ENGINEERING & TECHNOLOGY**

Address of Applicant :19, Knowledge Park-II, Institutional Area, Greater Noida – 201306, Uttar Pradesh, India. -----

Name of Applicant : NA

Address of Applicant : NA

(72)Name of Inventor :

**1)Dr. ABHISHEK PRATAP SINGH**

Address of Applicant :Department of Mechanical Engineering, Noida Institute of Engineering & Technology, Greater Noida. Greater Noida -----

(57) Abstract :

A photo-activated coating application apparatus is disclosed, comprising a UV light source (10), dispensing unit (12), coating nozzle (14), and substrate platform (16). The apparatus enables continuous deposition and curing of photo-reactive coatings for smart windows. The inline UV activation ensures immediate polymerization, offering enhanced coating uniformity, reduced processing time, and compatibility with various light-sensitive materials.

No. of Pages : 13 No. of Claims : 5