



भारत सरकार GOVERNMENT OF INDIA पेटेंट कार्यालय THE PATENT OFFICE पेटेंट प्रमाणपत्र PATENT CERTIFICATE (Rule 74 of The Patents Rules) क्रमांक : 044145641 SL No :



पेटेंट सं. / Patent No. : 409304

आवेदन सं. / Application No. : 202241000685

फाइल करने की तारीख / Date of Filing : 06/01/2022

पेटेंटी / Patentee : VALLURUPALLI NAGESWARA RAO VIGNANA JYOTHI

INSTITUTE OF ENGINEERING AND TECHNOLOGY

प्रमाणित किया जाता है कि पेटेंटी को, उपरोक्त आवेदन में यथाप्रकटित NON-CONTACT NANOSTRUCTURE AND METHOD OF MANUFACTURING THE SAME FOR FOULING FREE SOLAR DESALINATION नामक आविष्कार के लिए, पेटेंट अधिनियम, 1970 के उपबंधों के अनुसार आज तारीख जनवरी 2022 के छटे दिन से बीस वर्ष की अविध के लिए पेटेंट अनुदत्त किया गया है।

It is hereby certified that a patent has been granted to the patentee for an invention entitled NON-CONTACT NANOSTRUCTURE AND METHOD OF MANUFACTURING THE SAME FOR FOULING FREE SOLAR DESALINATION as disclosed in the above mentioned application for the term of 20 years from the 6th day of January 2022 in accordance with the provisions of the Patents Act,1970.

## ROPERTY INDIA STS DESIGNS TRADE MARKS OCRAPHICAL INDICATIONS

अनुदान की तारीख Date of Grant:

19/10/2022

Controller of Patent

टिप्पणी - इस पेटेंट के नवीकरण के लिए फीस, यदि इसे बनाए रखा जाना है, जनवरी 2024 के छठे दिन को और उसके पश्चात प्रत्येक वर्ष मे उसी दिन देय होगी।

**Note.** - The fees for renewal of this patent, if it is to be maintained will fall / has fallen due on 6<sup>th</sup> day of January 2024 and on the same day in every year thereafter.



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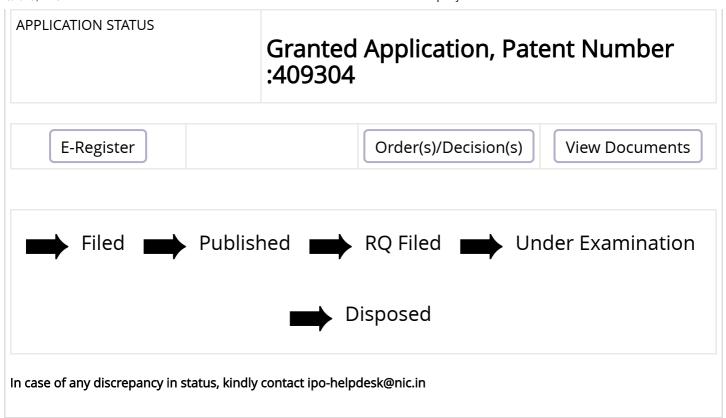
## (http://ipindia.nic.in/index.htm)



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Application Details	
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APPLICATION TYPE	ORDINARY APPLICATION
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APPLICANT NAME	VALLURUPALLI NAGESWARA RAO VIGNANA JYOTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY
TITLE OF INVENTION	NON-CONTACT NANOSTRUCTURE AND METHOD OF MANUFACTURING THE SAME FOR FOULING FREE SOLAR DESALINATION
FIELD OF INVENTION	ELECTRONICS
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## (57) Abstract:

A non-contact nanostructure (1) and method of manufacturing the same for fouling free solar desalination comprising perforated SS202 sheet (4) with high absorptive nanocoating on the top side (2) and high emissive coating on the bottom side (3). The high absorptive thermolax nanocoating is being done on the top side of SS202 perforated sheet. The paint is being used to produce a high emissive surface on the bottom side. The method of manufacturing non-contact nanostructure (1) for fouling free solar desalination comprising the steps of: a) highly absorptive top-level/layer nanocoating is being done; b) highly emissive bottom level/layer is being done. The invention provides a solution to the fouling problem which included regular cleaning and washing, recycling of material.

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