



**INTELLECTUAL  
PROPERTY INDIA**  
PATENTS | DESIGNS | TRADE MARKS  
GEOGRAPHICAL INDICATIONS



सत्यमेव जयते

क्रम सं/SL No : 044188777



**पेटेंट कार्यालय, भारत सरकार**

**The Patent Office, Government Of India**

**पेटेंट प्रमाण पत्र**

**Patent Certificate**

(पेटेंट नियमावली का नियम 74)

(Rule 74 of The Patents Rules)

**पेटेंट सं. / Patent No.**

5399993

**आवेदन सं. / Application No.**

201941009746

**फाइल करने की तारीख / Date of Filing**

13/03/2019

**पेटेंटी / Patentee**

ALVA'S EDUCATION FOUNDATION

प्रमाणित किया जाता है कि पेटेंटी को, उपरोक्त आवेदन में यथाप्रकरित **ENHANCEMENT OF DIRECT METHANOL FUEL CELL PERFORMANCE WITH NAFION PROTON EXCHANGE MEMBRANE OPTIMALLY EXPOSED TO ULTRAVIOLET RAYS** नामक आविष्कार के लिए, पेटेंट अधिनियम, 1970 के उपबंधों के अनुसार आज तारीख मार्च 2019 के तेरहवें दिन से बीस वर्ष की अवधि के लिए पेटेंट अनुदत्त किया गया है।

It is hereby certified that a patent has been granted to the patentee for an invention entitled **ENHANCEMENT OF DIRECT METHANOL FUEL CELL PERFORMANCE WITH NAFION PROTON EXCHANGE MEMBRANE OPTIMALLY EXPOSED TO ULTRAVIOLET RAYS** as disclosed in the above mentioned application for the term of 20 years from the 13<sup>th</sup> day of March 2019 in accordance with the provisions of the Patents Act, 1970.



**इकात की संज्ञा**

**अनुदान की तारीख / Date of Grant : 30/05/2024**

**टिप्पणी -** इस पेटेंट के नवीकरण के लिए फीस, यदि इसे बनाए रखा जाना है, मार्च 2021 के तेरहवें दिन को और उसके पश्चात प्रत्येक वर्ष में उसी दिन देय होगी।

**Note.** - The fees for renewal of this patent, if it is to be maintained, will fall / has fallen due on 13<sup>th</sup> day of March 2021 and on the same day in every year thereafter.

**Controller of Patents**





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एकस्व/PATENTS | अभिकल्प/DESIGNS |  
व्यापार चिह्न/TRADE MARKS | भौगोलिक  
उपदर्शन/GEOGRAPHICAL INDICATIONS



**भारत सरकार  
GOVERNMENT OF INDIA**

एकस्व कार्यालय / THE PATENT OFFICE  
बौद्धिक सम्पदा भवन / I.P.O. BUILDING  
जी.एस.टी.रोड, गिन्डी / G.S.T.Road, Guindy,  
चेन्नई / Chennai- 600032  
दूरभाष / Tel. No. : (091)(044)22502081-84  
फैक्स / Fax: 044 22502066

Email/ई मेल : [Chennai-patent@nic.in](mailto:Chennai-patent@nic.in)  
वेबसाइट / Website: <http://ipindia.nic.in>

सं. \ No. 201941009746

दिनांक \ Dated the 30/05/2024

सेवा में, \ To :

Address of Service:- ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY SHOBHAVANA CAMPUS, MIJAR, MOODBIDRI,  
DAKSHINA KANNADA - 574 225, KARNATAKA, INDIA. rpinto1942@gmail.com  
Email Id:- rpinto1942@gmail.com

विषय :- पेटेंट आवेदन संख्या 201941009746 के संबंध में अधिनियम की धारा 43 के तहत पेटेंट अनुदान तथा पेटेंट रजिस्टर में प्रविष्टि की सूचना  
Sub :- Intimation of the grant and recordal of patent under section 43 of the Act in respect of patent application no. 201941009746

महोदय/महोदया,  
Sir/Madam,

आपको सूचित किया जाता है कि पेटेंट अधिनियम, 1970 की धारा 12 व 13 तथा उस आधार पर बने नियम के तहत उपर्युक्त पेटेंट आवेदन के परीक्षण [व 13/05/2024 को हुई सुनवाई] के उपरांत एतद्वारा पेटेंट अनुदान किया जाता है। तथा पेटेंट अनुदान की प्रविष्टि 30/05/2024 को पेटेंट रजिस्टर में कर दी गयी है।

This is to Inform you that following the examination of above mentioned patent application under section 12 and 13 of The Patents Act, 1970 and Rules made thereunder [and hearing held on 13/05/2024 ] a patent is hereby granted and recorded in the Register of Patents on the 30/05/2024. The Patent Certificate is enclosed herewith.

पेटेंट संख्या \ Patent No	: 539993
आवेदक का नाम \ Name Of Applicant	: ALVA'S EDUCATION FOUNDATION
पेटेंट दिनांक \ Date of Patent	: 13/03/2019
पूर्विका तिथि \ Priority Date	: 13/03/2019
परीक्षण हेतु अनुरोध दाखिल करने की तिथि \ Filing date of Request for examination	: 25/08/2021
शीर्षक \ Title	: ENHANCEMENT OF DIRECT METHANOL FUEL CELL PERFORMANCE WITH NAFION PROTON EXCHANGE MEMBRANE OPTIMALLY EXPOSED TO ULTRAVIOLET RAYS
दावों की संख्या \ Number of claims	: 1 as filed on 28/05/2024
Controller' Name	: Sanchit Parakh
Controller' Email	: sanchit.ipo@gov.in
Controller' Location	: Delhi

उपर्युक्त पेटेंट के अनुदान का प्रकाशन अधिनियम की धारा 43 के तहत पेटेंट कार्यालय के आधिकारिक जर्नल में किया जाएगा।  
The grant of above mentioned patent will be published in the Official Journal of the patent Office under section 43 of the Act.

पेटेंट अधिनियम 1970 यथा संशोधित पेटेंट (संशोधन) नियम, 2005/ पेटेंट नियम, 2003 यथा संशोधित पेटेंट (संशोधन) नियम, 2016 की धारा 142 की उप-धारा (4) के प्रावधानों के तहत उपरोक्त प्रविष्टि की तिथि से 3 माह के भीतर इस कार्यालय में नवीकरण शुल्क जमा किया जाना चाहिए।

The payment of renewal fee is required to be made at this office within three(3) months from the aforesaid date of recording according to the proviso in sub-section(4) of Section 142 of The Patents Act,1970, as amended by The Patents (Amendment) Act, 2005 / The Patents Rules, 2003 as amended by The Patents (Amendment) Rules, 2016.

Sanchit Parakh

(नियंत्रक पेटेंट)

Controller of Patents


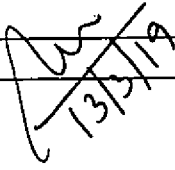
टिप्पणी / Note :

1. संशोधित नवीकरण शुल्क हेतु कृपया महानियंत्रक पेटेंट, अभिकल्प एवं व्यापार चिह्न की आधिकारिक वेबसाइट [www.ipindia.gov.in](http://www.ipindia.gov.in) पर उपलब्ध पेटेंट (संशोधन) नियम 2016 की प्रथम अनुसूची (शुल्क) देखें।

For revised renewal fees kindly refer to the First Schedule (fees) of The Patents (Amendment) Rules 2016 available on the official website of Controller General of Patents, Designs and Trade Marks [www.ipindia.gov.in](http://www.ipindia.gov.in)

2. कार्यालय द्वारा पेटेंट प्रमाणपत्र की कोई भी कागजी प्रति अलग से जारी नहीं की जाएगी।

No hard copy of Patent Certificate shall be issued separately by the office.

<b>FORM 1</b> <b>THE PATENTS ACT 1970</b> <b>(39 of 1970) &amp;</b> <b>The Patent Rules, 2003</b> <b>APPLICATION FOR GRANT OF</b> <b>PATENT</b> (See section 7, 54 & 135, and rule 20(1))				<b>(FOR OFFICE USE ONLY)</b> Application No: Filing Date: Amount of fee paid: CBR No: Signature:	
				 700244994	
		Application No.		201941009746	
		Filing date:		13.03.2019	
		Amount of Fee paid:		8800/-	
		CBR No:		8123	
		Signature		 13/3/19	
1. APPLICANT'S REFERENCE / IDENTITY NUMBER. (AS ALLOTTED BY OFFICE)					
2. TYPE OF APPLICATION [Please tick (✓) at the appropriate category]					
Ordinary (✓)		Convention ()		PCT-NP ()	
Divisional ()	Patent of Addition ()	Divisional ()	Patent of Addition ()	Divisional ()	Patent of Addition ()
3A. APPLICANTS					
Name in Full	Nationality	Country of Residence	Address of Applicant		
ALVA'S EDUCATION FOUNDATION	Indian	India	ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY SHOBHAVANA CAMPUS, MIJAR, MOODBIDRI, DAKSHINA KANNADA - 574225, KARNATAKA, INDIA		
3B. CATEGORY OF APPLICANT [Please tick (✓) at the appropriate category]					
Natural Person (✓)				Others ()	
4. INVENTOR(S) [Please tick (✓) at the appropriate category]					
Are all the inventor(s) same as the applicant(s) named above?		Yes ()		No (✓)	
If NO furnish the details of the inventors					
Name in Full	Nationality	Country of Residence	Address of Applicant		
ARJUN SUNIL RAO	Indian	India	ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY, SHOBHAVANA CAMPUS, MIJAR, MOODBIDRI, DAKSHINA KANNADA - 574225, KARNATAKA, INDIA		
JAYARAMA ARASALIKE	Indian	India	ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY, SHOBHAVANA CAMPUS, MIJAR, MOODBIDRI, DAKSHINA KANNADA - 574225, KARNATAKA, INDIA		
MANJUNATHA DODDABALLAPURA VEERABHADRAIAH	Indian	India	ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY, SHOBHAVANA CAMPUS, MIJAR,		

PATENT

			MOODBIDRI, DAKSHINA KANNADA - 574225, KARNATAKA, INDIA		
PRAVEEN JAYAPPA	Indian	India	ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY, SHOBHAVANA CAMPUS, MIJAR, MOODBIDRI, DAKSHINA KANNADA - 574225, KARNATAKA, INDIA		
RICHARD PINTO	Indian	India	ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY, SHOBHAVANA CAMPUS, MIJAR, MOODBIDRI, DAKSHINA KANNADA - 574225, KARNATAKA, INDIA		
PETER FERNANDES	Indian	India	ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY, SHOBHAVANA CAMPUS, MIJAR, MOODBIDRI, DAKSHINA KANNADA - 574225, KARNATAKA, INDIA		
<b>5. TITLE OF THE INVENTION</b>					
"ENHANCEMENT OF DIRECT METHANOL FUEL CELL PERFORMANCE WITH NAFION PROTON EXCHANGE MEMBRANE OPTIMALLY EXPOSED TO ULTRAVIOLET RAYS"					
<b>6. AUTHORISED REGISTERED PATENT AGENT(S)</b>					
			Name		
			Mobile no.		
<b>7. ADDRESS FOR SERVICE OF APPLICANT IN INDIA</b>			Name		ALVA'S EDUCATION FOUNDATION
			Postal Address		ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY SHOBHAVANA CAMPUS, MIJAR, MOODBIDRI, DAKSHINA KANNADA - 574225, KARNATAKA, INDIA
			Telephone No.		-
			Mobile No.		09892818760/ 09920818760
			Fax No.		08258 - 262726
			E-Mail ID		rpinto1942@gmail.com
<b>8. IN CASE OF APPLICATION CLAIMING PRIORITY OF APPLICATION FILLED IN CONVENTION COUNTRY, PARTICULARS OF CONVENTION APPLICATION</b>					
Country	Application number	Filing date	Name of applicant	Title of invention	IPC (as classified in the convention country)
Not Applicable					
<b>9. IN CASE OF PCT NATIONAL PHASE APPLICATION, PARTICULARS OF INTERNATIONAL APPLICATION FILED UNDER PATENT CO-OPERATIVE TREATY (PCT)</b>					
International application number:			Not Applicable	International filing date:	
				Not Applicable	
<b>10. IN CASE OF DIVISIONAL APPLICATION FILED UNDER SECTION 16,</b>					

PATENT

**PARTICULARS OF ORIGINAL (FIRST) APPLICATION**

Original (first) application number: Not Applicable	Date of filing of Original (first) application: Not Applicable
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**11. IN CASE OF PATENT OF ADDITION FILED UNDER SECTION 54, PARTICULARS OF MAIN APPLICANT OR PATENT**

Main application/ Patent Number: Not Applicable	Date of Filing of main application: Not Applicable
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**12. DECLARATION****i) Declaration by the inventors**

(In case the applicant is an assignee: the inventors may sign herein below or the applicant may upload the assignment or enclose the assignment with this application for patent or send the assignment by post/ electronic transmission duly authenticated within the prescribed period)

We, the above named inventors are the true and first inventors for this invention and declare that the applicants herein are our assignee or legal representative.

(i)


(a) Date: 13/3/2019

(b) Signature of the inventors: 

(c) Name: **ARJUN SUNIL RAO**

(ii)


(a) Date: 13/3/2019

(b) Signature of the inventors: 

(c) Name: **JAYARAMA ARASALIKE**

(iii)


(a) Date: 13/3/2019

(b) Signature of the inventors: 

(c) Name: **MANJUNATHA DODDABALLAPURA VEERABHADRAIAH**

(iv)

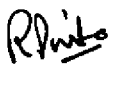
(a) Date: 13/3/2019

(b) Signature of the inventors: 

(c) Name: **PRAVEEN JAYAPPA**

iv)


(a) Date: 13/3/2019

(b) Signature of the inventors: 

(c) Name: **RICHARD PINTO**

iv)

(a) Date: 13/3/2019

(b) Signature of the inventors: 

(c) Name: **PETER FERNANDES**

**ii) Declaration by the applicant:**

I, the applicant hereby declare that:-

- ☐ I am in possession of the above mentioned invention.
- ☐ The provisional/complete specification relating to the invention is filed with this application.
- ☐ The invention as disclosed in the specification uses the biological material from India and the necessary permission from the competent authority shall be submitted by us before the grant of the patent to us.
- ☐ There is no lawful ground of objection to the grant of the patent to us.
- ☐ I am the assignee or legal representative of true and first inventors.
- ☐ The application or each of the application, particulars of which are given in Para 5 was

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was the first application in convention country/countries in respect of our invention.

- ☐ I claim the priority from the above mentioned applications filed in convention country and state that no application for protection in respect of the invention had been made in a convention country before that date by me/us or by any person from which we derive the title.
- ☐ My application in India is based on international application under Patent Cooperation Treaty (PCT) as mentioned in Para - 9.
- ☐ The application is divided out of our application particulars of which are given in Para-10 and pray that this application may be treated as deemed to have been filed on..... under section 16 of the Act.
- ☐ The said invention is an improvement in or modification of the invention particulars of which are given in Para-11

### 13. FOLLOWING ARE THE ATTACHMENTS WITH THE APPLICATION

(a) Form 2

Item	Details	Fee	Remarks
Complete specification	No. of Pages : 15		
No. of Claims	No. of claims : 1 No. of Pages : 2	Rs. 8800/-	Add claims - N/A Add pages - N/A
Abstract	No. of Pages : 1		
No. of Drawings	No. of drawings : 4 No. of pages : 4		

In case of a complete specification, if the applicant desires to adopt the drawings filed with his provisional specification as the drawings or part of drawings for the complete specification under rule 13(4) ; the number of such pages filed with the provisional specification are required to mentioned here.

(b) Complete specification (in confirmation with the international application)/ as amended before the International preliminary Examination Authority (IPEA), as applicable (2 copies).

(c) Sequence listing in electronic format.

(d) Drawing (in confirmation with the international application)/ as amended before the International preliminary Examination Authority (IPEA), as applicable (2 copies).

(e) Priority document (s) or a request to retrieve the priority document(s) from DAS (Digital Access Service) if the applicant had already requested the office of first filing to make the priority document(s) available to DAS.

(f) Translation of priority document/ Specification/ International Search Report/ International Preliminary Report on Patentability.

(g) Statement and Undertaking on Form 3.

(h) Declaration of Inventor ship on Form 5.

(i) Power of Attorney.

(j) Total Fee ₹ \_\_\_\_\_ in Cheque bearing no: \_\_\_\_\_ dated this \_\_\_\_\_ drawn from \_\_\_\_\_ bank, \_\_\_\_\_

We hereby declare that to the best of our knowledge, information, and belief that the fact and matters stated herein are correct and we request that a patent may be granted to us for the said invention.

Dated this 13<sup>th</sup> day of March, 2019.

For ALVA'S EDUCATION FOUNDATION,

Authorized Signatory: 

Name in full: Dr. Mohan Alva  
Designation: Chairman

Seal:

To,  
The Controller of Patents,  
Patent Office Chennai,  
Chennai - 600 032.

14 / 03 / 2019

Chairman  
Chairman  
Alva's Education Foundation (R)  
MOODBIDRI - 574227, D.K.

PATENT