

THIAGARAJAR COLLEGE :: MADURAI

PATENTS

S.No.	Name of the Staff	Patent No	Title of the patent	Status		
1	Dr. A. Thamarachelvan, Department of Chemistry	243311 Appl.No: 1042/CHE/2007	A Novel, Granular, Nutrient coated Nitrogenous fertilizer and a method to produce the same	Granted on 08.10.2010		
2	Dr. P. Tharmaraj, Associate Professor, Department of Chemistry	2022/02141 International Classification : <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>51</td><td>G01N</td></tr></table>	51	G01N	An Empirical System for Risk Assessment of Mental Illness Disorders using Neural Network Diagnostic	Granted on 25.05.2022
51	G01N					
3	Dr. P. Tharmaraj, Associate Professor, Department of Chemistry	389029, Application No: 202041034117 dt.08.08.2020	A Process Of Preparing Anti-Cancer Activities Exhibiting Novel Bis(DPPT) Cobalt (II) Chloride And Product thereof	Granted on 11.02.2022		
4	Dr. P. Tharmaraj, Associate Professor, Department of Chemistry	Application No : 202041049600A dt.13.11.2020 Patent No. 520476	A Process of Synthesis of Poly (Neem Triglyceride Oil Fumarate) Æ Monomer Based Polyester and Products thereof	Granted on 06.03.2024		
5	Inventor : Dr. P. Tharmaraj, Associate Professor, Department of Chemistry	Application No : 202041049601A dt.13.11.2020	A Process of Synthesis of Poly (Neem Triglyceride Oil Fumarate) Æ Monomer-Nano Metal Oxide Based Polyester and Products Thereof	Granted on 21.12.2023		
6	Dr. P. Tharmaraj, Associate Professor, Department of Chemistry	Application No : 202141004751 A dt.03.02.2021 Patent No. 512034	A process of Preparing Novel curcumin – Triazine Based Transition Metal Complexes and products thereof	Granted on 19.02.2024		
7	Dr. P. Tharmaraj, Associate Professor, Department of Chemistry	Application No : 202141037179 A dt. 17.08.2021	A Process of Preparation of Natural Fiber Reinforced Polymer Composite Sheets and product thereof	Published on 27.08.2021		
8	Dr. D. Kannan Assistant Professor, Department of Botany	Application No : 202241044350 Dt. 03.08.2022	Bioremediation of Pickle Industry Effluent Using Effective Microorganismstm And Method Thereof	Granted on 08.01.2024		
9	Dr. K. Lingaraja Assistant Professor, Department of Business Administration	Application No : 202041024596 A	ISPT-Mobile Banking : Intelligent and Secured Payment transfer using 4-G, 5-G Mobile Banking	Published on 26.06.2020		
10	Dr. P. Manickam Assistant Professor, Department of Computer Science	Application No : 202241027248	An Embedded Prime Lightweight block cipher for smart devices	Published on 17.06.2022		
11	Dr. C. Karthikeyan,	Application No : 202341027779 A	Artificial Intelligence based approach to analyse the	Published on 05.05.2023		

	Assistant Professor, Dept. of Biotechnology		impact of green gold nanoparticles in cancer therapy and diagnosis	
12	Dr. N. Gnanasekaran & Dr. G. Rakesh Assistant Professors, Dept. of Computer Science	202321027527 A	IOT based secure and emergency communication between electric vehicle and rescue team	12.05.2023
13	Dr. S. Urmila Assistant Professor,	202241035991 A	Real-time multi-face attendance evaluation with an interactive APP	26.05.2023
14	Dr. Rm. Murugappan & Dr. M. Karthikeyan Head & Associate Professor, Dept. of Zoology & Microbiology	Application No. : 392872-001	Wireless based Cardiac blood clot tester	Applied on 16.08.2023

1	Dr. A. Thamarachelvan, Department of Chemistry	243311 Appl.No: 1042/CHE/2007	A Novel, Granular, Nutrient coated Nitrogenous fertilizer and a method to produce the same	Granted on 08.10.2010
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Office of the Controller General of Patents, Designs & Trade Marks
Department of Industrial Policy & Promotion,
Ministry of Commerce & Industry,
Government of India

(<http://ipindia.nic.in/index.htm>)



(<http://ipindia.nic.in/index.htm>)

Application Details

APPLICATION NUMBER	1042/CHE/2007
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	17/05/2007
APPLICANT NAME	1 . V.ANANTHAPPAN 2 . A.THAMARAICHELVAN
TITLE OF INVENTION	A NOVEL GRANULAR NUTRIENT COATED NITROGENOUS FERTILIZER AND A METHOD TO PRODUCE THE SAME
FIELD OF INVENTION	MICRO BIOLOGY
E-MAIL (As Per Record)	
ADDITIONAL-EMAIL (As Per Record)	
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	17/10/2007
PUBLICATION DATE (U/S 11A)	09/11/2007
FIRST EXAMINATION REPORT DATE	13/08/2009
Date Of Certificate Issue	05/10/2010
POST GRANT JOURNAL DATE	08/10/2010
REPLY TO FER DATE	20/07/2010

Application Status

APPLICATION STATUS	Granted Application, Patent Number :243311
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2	Dr. P. Tharmaraj, Associate Professor, Department of Chemistry	2022/02141 International Classification : 51 G01N	An Empirical System for Risk Assessment of Mental Illness Disorders using Neural Network Diagnostic	Granted on 25.05.2022
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REPUBLIC OF SOUTH AFRICA

REPUBLIEK VAN SUID AFRIKA

PATENTS ACT, 1978

CERTIFICATE

In accordance with section 44 (1) of the Patents Act, No. 57 of 1978, it is hereby certified that:

MR. ZATIN GUPTA;
DR. P.THARMARAJ;
DR.J.SHAKINA;
DR RAHUL DUBEY;
DR. DURGACHARAN ARUN BHAGWAT;
DR UMESH KUMAR PANDEY;
DR SAURABH PAL;
DR SHIKHA GUPTA

Has been granted a patent in respect of an invention described and claimed in complete specification deposited at the Patent Office under the number

2022/02141

A copy of the complete specification is annexed, together with the relevant Form P2.

In testimony thereof, the seal of the Patent Office has been affixed at Pretoria with effect from the **25th** day of **May 2022**




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Registrar of Patents

**REPUBLIC OF SOUTH AFRICA
PATENTS ACT, 1978
REGISTER OF PATENTS**

FORM P2

Official application No.		Lodging date: Provisional		Acceptance date	
21	01 2022/02141	22		47	10 May 2022
International classification		Lodging date: National phase		Granted date	
51	G01N	23	21 February 2022		25 May 2022
71	Full name(s) of applicant(s)/Patentee(s): (1) Mr. Zatin Gupta; (2) Dr. P.THARMARAJ; (3) Dr.J.SHAKINA; (4) Dr Rahul Dubey; (5) Dr. Durgacharan Arun Bhagwat,; (6) Dr Umesh Kumar Pandey; (7) Dr Saurabh Pal; (8) Dr Shikha Gupta				
71	Applicant(s) substituted:			Date registrered	
71	Assignee(s):			Date registrered	
72	Full name(s) of inventor(s): (1) Mr. Zatin Gupta; (2) Dr. P.THARMARAJ; (3) Dr.J.SHAKINA; (4) Dr Rahul Dubey; (5) Dr. Durgacharan Arun Bhagwat,; (6) Dr Umesh Kumar Pandey; (7) Dr Saurabh Pal; (8) Dr Shikha Gupta				
Priority claimed:	Country	Number	Date		
54	Title of invention AN EMPIRICAL SYSTEM FOR RISK ASSESSMENT OF MENTAL ILLNESS DISORDERS USING NEURAL NETWORK DIAGNOSTIC				
Address of applicant(s)/patentee(s): (1) KIET Group of Institutions, Delhi-NCR, Ghaziabad & Research Scholar, Department of CSE, MMEC, MM(DU), Mullana, Ambala, Haryana, Uttar Pradesh, India; (2) PG and Research Department of Chemistry, Thiagarajar College (Autonomous), 139-140 Kamarajar salai, Teppakulam, Madurai, Tamilnadu, 625009, India; (3) Department of Chemistry and Research Centre, Sarah Tucker College, (Autonomous), Perumalpuram, Tirunelveli, Tamilnadu, 627007, India; (4) Department of Electronics Engineering MITS, Gwalior, Madhya Pradesh, India; (5) Bharati Vidyapeeth College of Pharmacy, Near Chitranagari, Morewadi, Kolhapur, MS, Maharashtra, 416013, India; (6) Department of Computer Science and Engineering, United Institute of Technology Naini, Prayagraj, Uttar Pradesh, India; (7) Department of Computer Application, V B S Purvanchal University Campus, Jaunpur, Uttar Pradesh, 222003, India; (8) Department - Computer Engineering Department, Lokmanya Tilak College of Engineering, Sector-4, Koparkhairane, Navi Mumbai, Maharashtra, 400709, India					
74	Address for service Sibanda and Zantwijk, Oaktree Corner, 9 Kruger Street, Oaklands (PO Box 1615 Houghton 2041), Johannesburg, 2192, SOUTH AFRICA Reference no.: GPC00005866ZA ([InsID: 482])				
61	Patent of addition No.			Date of any change	
Fresh application based on.			Date of any change		

3	Dr. P. Tharmaraj, Associate Professor, Department of Chemistry	389029, Application No :202041034117, 08.08.2020	A Process Of Preparing Anti- Cancer Activities Exhibiting Novel Bis(DPPT) Cobalt (II) Chloride And Product thereof	Granted on 11.02.2022
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**INTELLECTUAL
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PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS



सत्यमेव जयते

भारत सरकार
GOVERNMENT OF INDIA
पेटेंट कार्यालय
THE PATENT OFFICE
पेटेंट प्रमाणपत्र
PATENT CERTIFICATE
(Rule 74 Of The Patents Rules)

क्रमांक : 044138399
SL No :



पेटेंट सं. / Patent No. : 389029

आवेदन सं. / Application No. : 202041034117

फाइल करने की तारीख / Date of Filing : 08/08/2020

पेटेंटी / Patentee : DR. P. THARMARAJ

आविष्कारक (जहां लागू हो) / Inventor(s) : 1.DR. P. THARMARAJ 2.LAZAR ALPHONSE
3.DR.C.DOROTHY SHEELA

प्रमाणित किया जाता है कि पेटेंटी को उपरोक्त आवेदन में यथाप्रकटित A PROCESS OF PREPARING ANTI-CANCER ACTIVITIES EXHIBITING NOVEL BIS(DPPT) COBALT (II) CHLORIDE AND PRODUCT THEREOF नामक आविष्कार के लिए, पेटेंट अधिनियम, १९७० के उपबंधों के अनुसार आज तारीख 8th day of August 2020 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 A PROCESS OF PREPARING ANTI-CANCER ACTIVITIES EXHIBITING NOVEL BIS(DPPT) COBALT (II) CHLORIDE AND PRODUCT THEREOF as disclosed in the above mentioned application for the term of 20 years from the 8th day of August 2020 in accordance with the provisions of the Patents Act,1970.

**INTELLECTUAL
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PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS



अनुदान की तारीख : 11/02/2022
Date of Grant :


पेटेंट नियंत्रक
Controller of Patent

टिप्पणी - इस पेटेंट के नवीकरण के लिए फीस, यदि इसे बनाए रखा जाना है, **8th day of August 2022** 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 8th day of August 2022 and on the same day in every year thereafter.

पेटेंट कार्यालय
शासकीय जर्नल

**OFFICIAL JOURNAL
OF
THE PATENT OFFICE**

निर्गमन सं. 47/2020
ISSUE NO. 47/2020

शुक्रवार
FRIDAY

दिनांक: 20/11/2020
DATE: 20/11/2020

पेटेंट कार्यालय का एक प्रकाशन
PUBLICATION OF THE PATENT OFFICE

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202041049600 A

(19) INDIA

(22) Date of filing of Application :13/11/2020

(43) Publication Date : 20/11/2020

(54) Title of the invention : A PROCESS OF SYNTHESIS OF POLY (NEEM TRIGLYCERIDE OIL FUMARATE) $\alpha\epsilon$ -MONOMER BASED POLYESTER AND PRODUCTS THEREOF

(51) International classification	:A61K9/4816	(71)Name of Applicant :
(31) Priority Document No	:NA	1)DR.PAUL MONEY THARMARAJ
(32) Priority Date	:NA	Address of Applicant :ASSISTANT PROFESSOR
(33) Name of priority country	:NA	RESEARCH CENTRE AND P.G DEPARTMENT OF
(86) International Application No	:NA	CHEMISTRY THIAGARAJAR COLLEGE MADURAI TAMIL
Filing Date	:NA	NADU INDIA 625009 Tamil Nadu India
(87) International Publication No	:NA	(72)Name of Inventor :
(61) Patent of Addition to Application Number	:NA	1)DR.PAUL MONEY THARMARAJ
Filing Date	:NA	2)DR.JUSTUS SHAKINA
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

APPLICANT: DR.PAUL MONEY THARMARAJ TITLE: A PROCESS OF SYNTHESIS OF POLY (NEEM TRIGLYCERIDE OIL FUMARATE) $\alpha\epsilon$ -MONOMER BASED POLYESTER AND PRODUCTS THEREOF ABSTRACT The present invention disclose a process of synthesis of poly (neem triglyceride oil fumarate) $\alpha\epsilon$ monomer based polyester and products thereof. The process of the present invention comprises of following reaction steps; $\alpha\epsilon$ preparation of hydroxylated neem oil comprising of mixing 100 mL of Triglyceride oil of neem oil and 100 mL of formic acid in a 1:1 ratio under vigorous stirring at 0 ^\circ C followed by slowly adding 30 %, 55 mL of hydrogen peroxide under continues stirring for 24 hours with temperature maintained below 35 ^\circ C to form a residue in which the residue is extracted thrice with 3 x 40 mL diethylether solvent and organic layer was separated and dried over anhydrous sodium sulphate and solvent was filtered and evaporated using rotaevaporator to isolate hydroxylated triglyceride oil; $\alpha\epsilon$ preparation of poly (Neem triglyceride oil fumarate) polyester resin comprising of blending 100mL of the hydroxylated triglyceride oil with 49 gm, 0.5 mol of maleic anhydride in ambient temperature using overhead stirrer and heated to 70 oC for 2 hrs followed by adding catalytic amount of morpholine base (3-4 drops) upon vigorous blending to form poly (Neem triglyceride oil fumarate) polyester resin; $\alpha\epsilon$ preparation of poly (neem triglyceride oil fumarate) $\alpha\epsilon$ monomer based polyester comprising of adding 10mL of the poly (Neem triglyceride oil fumarate) polyester resin with 10 mL of monomer in 1:1 equivalent ratio and treated with catalytic amount of benzoyl peroxide (60mg) as a free radical initiator and N,N-dimethylaniline (2-3 drops) as an accelerator followed by vigorous stirring for 10 min using over-head stirrer and poured in glass plate mold pre-coated with silicone oil in the size of 10 x 10 cm and after 5 hours, transparent polymer sheet comprising of poly (neem triglyceride oil fumarate) $\alpha\epsilon$ monomer based polyester was peeled off from the glass plate.

No. of Pages : 19 No. of Claims : 7

5	Inventor : Dr. P. Tharmaraj, Associate Professor, Department of Chemistry	Application No : 202041049601A dt.13.11.2020	A Process of Synthesis of Poly (Neem Triglyceride Oil Fumarate) Æ Monomer- Nano Metal Oxide Based Polyester and Products Thereof	Granted on 21.12.2023
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पेटेंट कार्यालय, भारत सरकार | **The Patent Office, Government Of India**
पेटेंट प्रमाण पत्र | **Patent Certificate**

(पेटेंट नियमानली का नियम 74) | (Rule 74 of The Patents Rules)

पेटेंट सं. / Patent No. : 487200
आवेदन सं. / Application No. : 202041049601
फाइल करने की तारीख / Date of Filing : 13/11/2020
पेटेटी / Patentee : DR. JUSTUS SHAKINA

प्रमाणित किया जाता है कि पेटेटी को उपरोक्त आवेदन में यथाप्रकटित A PROCESS OF SYNTHESIS OF POLY (NEEM TRIGLYCERIDE OIL FUMARATE) –MONOMER-NANO METAL OXIDE BASED POLYESTER AND PRODUCTS THEREOF नामक आविष्कार के लिए, पेटेंट अधिनियम, 1970 के उपबंधों के अनुसार आज तारीख नम्बर 2020 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 A PROCESS OF SYNTHESIS OF POLY (NEEM TRIGLYCERIDE OIL FUMARATE) –MONOMER-NANO METAL OXIDE BASED POLYESTER AND PRODUCTS THEREOF as disclosed in the above mentioned application for the term of 20 years from the 13th day of November 2020 in accordance with the provisions of the Patents Act, 1970.


पेटेंट नियंत्रक
Controller of Patents

अनुदान की तारीख
Date of Grant : 21/12/2023

टिप्पणी - इस पेटेंट के नवीकरण के लिए फीस, यदि इसे नया रखा जाना है, नवंबर 2022 के तेरहवें दिन को और उसके पचास प्रत्येक वर्ष में उसी दिन देना होगा।
Note. - The fees for renewal of this patent, if it is to be maintained, will fall / has fallen due on 13th day of November 2022 and on the same day in every year thereafter.

पेटेंट कार्यालय
शासकीय जर्नल

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दिनांक: 20/11/2020
DATE: 20/11/2020

पेटेंट कार्यालय का एक प्रकाशन
PUBLICATION OF THE PATENT OFFICE

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202041049601 A

(19) INDIA

(22) Date of filing of Application :13/11/2020

(43) Publication Date : 20/11/2020

(54) Title of the invention : A PROCESS OF SYNTHESIS OF POLY (NEEM TRIGLYCERIDE OIL FUMARATE) $\hat{\text{a}}^{\text{c}}$ MONOMER-NANO METAL OXIDE BASED POLYESTER AND PRODUCTS THEREOF

(51) International classification	:A61K9/4816	(71)Name of Applicant :
(31) Priority Document No	:NA	1)DR. JUSTUS SHAKINA
(32) Priority Date	:NA	Address of Applicant :ASSISTANT PROFESSOR
(33) Name of priority country	:NA	RESEARCH CENTRE AND P.G DEPARTMENT OF
(86) International Application No	:NA	CHEMISTRY SARAH TUCKER COLLEGE
Filing Date	:NA	PALAYAMKOTTAI TAMILNADU INDIA 627007 Tamil Nadu
(87) International Publication No	: NA	India
(61) Patent of Addition to Application Number	:NA	(72)Name of Inventor :
Filing Date	:NA	1)DR. JUSTUS SHAKINA
(62) Divisional to Application Number	:NA	2)DR.PAUL MONEY THARMARAJ
Filing Date	:NA	

(57) Abstract :

APPLICANT: DR.JUSTUS SHAKINA TITLE: A PROCESS OF SYNTHESIS OF POLY (NEEM TRIGLYCERIDE OIL FUMARATE) $\hat{\text{a}}^{\text{c}}$ MONOMER-NANO METAL OXIDE BASED POLYESTER AND PRODUCTS THEREOF ABSTRACT The present invention disclose a process of synthesis of poly (neem triglyceride oil fumarate) $\hat{\text{a}}^{\text{c}}$ monomer-nano metal oxide based polyester and products thereof. The process comprises of following reaction steps; $\hat{\text{a}}^{\text{c}}$ preparation of hydroxylatedneem oil comprising of mixing 100 mL of Triglyceride oil of neem oil and 100 mL of formic acid in a 1:1 ratio under vigorous stirring at 0 $\hat{\text{A}}^{\text{c}}$ followed by slowly adding 30 %, 55 mL of hydrogen peroxide under continues stirring for 24 hours with temperature maintained below 35 $\hat{\text{A}}^{\text{c}}$ to form a residue in which the residue is extracted thrice with 3 x 40 mL diethylether solvent and organic layer was separated and dried over anhydrous sodium sulphate and solvent was filtered and evaporated using rotaevaporator to isolate hydroxylated triglyceride oil; $\hat{\text{a}}^{\text{c}}$ preparation of poly (Neem triglyceride oil fumarate) polyester resin comprising of blending 100mL of the hydroxylated triglyceride oil with 49 gm, 0.5 mol of maleic anhydride in ambient temperature using overhead stirrer and heated to 70oC for 2 hrs followed by adding catalytic amount of morpholine base (3-4 drops) upon vigorous blending to form poly (Neem triglyceride oil fumarate) polyester resin; $\hat{\text{a}}^{\text{c}}$ preparation of poly (neem triglyceride oil fumarate) $\hat{\text{a}}^{\text{c}}$ monomer-nano metal oxide based polyester comprising of adding 10mL of the poly (Neem triglyceride oil fumarate) polyester resin with 10 mL of monomer and nano metal oxide in 1:0.5: 0.4ratio and treated with catalytic amount of benzoyl peroxide (60mg) as a free radical initiator and N,N-dimethylaniline (2-3 drops) as an accelerator followed by vigorous stirring for 10 min using over-head stirrer and poured in glass plate mold pre-coatedwith silicone oil in the size of 10 x 10 cm and after 5 hours, transparent polymer sheet comprising of poly (neem triglyceride oil fumarate) $\hat{\text{a}}^{\text{c}}$ monomer-nano metal oxide based polyester was peeled off from the glass plate.

No. of Pages : 20 No. of Claims : 8

6	Dr. P. Tharmaraj, Associate Professor, Department of Chemistry	512034 Application No : 202141004751 A dt.03.02.2021	A process of Preparing Novel curcumin – Triazine Based Transition Metal Complexes and products thereof	Granted on 19.02.2024
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पेटेंट कार्यालय, भारत सरकार | **The Patent Office, Government Of India**
पेटेंट प्रमाण पत्र | **Patent Certificate**

(पेटेंट नियमानली का नियम 74) | (Rule 74 of The Patents Rules)

पेटेंट सं. / Patent No.	512034
आवेदन सं. / Application No.	202141004751
फाइल करने की तारीख / Date of Filing	03/02/2021
पेटेंटी / Patentee	DR.PAUL MONEY THARMARAJ
अविष्कारकों का नाम /Name of Inventor(s)	1.DR.PAUL MONEY THARMARAJ 2.LAZAR ALPHONSE 3.DR. CLARENCE DOROTHY SHEELA 4.DR. JUSTUS SHAKINA

प्रमाणित किया जाता है कि पेटेंटी को उपरोक्त आवेदन में बचाप्रकटित A PROCESS OF PREPARING NOVEL CURCUMIN-TRIAZINE BASED TRANSITION METAL COMPLEXES AND PRODUCTS THEREOF नामक अविष्कार के लिए, पेटेंट अधिनियम, 1970 के उपबंधों के अनुसार आज तारीख फरवरी 2021 के तीसरे 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 A PROCESS OF PREPARING NOVEL CURCUMIN-TRIAZINE BASED TRANSITION METAL COMPLEXES AND PRODUCTS THEREOF as disclosed in the above mentioned application for the term of 20 years from the 3rd day of February 2021 in accordance with the provisions of the Patents Act, 1970.



अनुदान की तारीख : 19/02/2024
Date of Grant : 19/02/2024

स्वात की संवि
पेटेंट नियंत्रक
Controller of Patents

टिप्पणी - इस पेटेंट के नवीकरण के लिए फीस, यदि इसे बनाए रखा जाता है, दिसंबर 2023 के तीसरे दिन को और उसके पश्चात प्रत्येक वर्ष में उसी दिनि देय होगी।
Note. - The fees for renewal of this patent, if it is to be maintained, will fall / has fallen due on 3rd day of February 2023 and on the same day in every year thereafter.

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202141004751 A

(19) INDIA

(22) Date of filing of Application :03/02/2021

(43) Publication Date : 12/02/2021

(54) Title of the invention : A PROCESS OF PREPARING NOVEL CURCUMIN-TRIAZINE BASED TRANSITION METAL COMPLEXES AND PRODUCTS THEREOF

(51) International classification	:C07F0015000000, B01J0037020000, B01J0037030000, H01M0004525000, B01J0031240000	(71)Name of Applicant : 1)DR.PAUL MONEY THARMARAJ Address of Applicant :PG AND RESEARCH DEPARTMENT OF CHEMISTRY THLAGARAJAR COLLEGE MADURAI TAMIL NADU INDIA 625009 Tamil Nadu India
(31) Priority Document No	:NA	(72)Name of Inventor : 1)DR.PAUL MONEY THARMARAJ 2)LAZAR ALPHONSE 3)DR. CLARENCE DOROTHY SHEELA 4)DR. JUSTUS SHAKINA
(32) Priority Date	:NA	
(33) Name of priority country	:NA	
(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	

(57) Abstract :

APPLICANT: DR.PAUL MONEY THARMARAJ TITLE: A PROCESS OF PREPARING NOVEL CURCUMIN-TRIAZINE BASED TRANSITION METAL COMPLEXES AND PRODUCTS THEREOF ABSTRACT The present invention discloses a process of preparing anti-tubercular and anti-cancer activity exhibiting novel curcumin-triazine based transition metal complexes and products thereof. The process of the present invention comprises of following steps: a. preparing a starting compound PMHMDD comprising of reacting a mixture of curcumin and imidazole-3-carboxaldehyde in ethanol solution in presence of piperidine to form the starting compound PMHMDD; b. preparing a Ligand PPTIDM comprising of reacting a mixture of starting compound PMHMDD 2,4-diamino-6-phenyl-1,3,5-triazine in ethanol in presence of piperidine to obtain the Ligand PPTIDM; c. preparing novel curcumin-triazine based transition metal complexes comprises of mixing the Ligand PPTIDM with a solution of anhydrous transitional metal salt solutions in the presence of ethanol to obtain the curcumin-triazine based transition metal complexes.

No. of Pages : 25 No. of Claims : 6

7	Dr. P. Tharmaraj, Associate Professor, Department of Chemistry	Application No : 202141037179 A dt. 17.08.2021	A Process of Preparation of Natural Fiber Reinforced Polymer Composite Sheets and product thereof	Published on 27.08.2021
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(12) PATENT APPLICATION PUBLICATION
(19) INDIA

(21) Application No.202141037179 A

(22) Date of filing of Application :17/08/2021

(43) Publication Date : 27/08/2021

(54) Title of the invention : A PROCESS OF PREPARATION OF NATURAL FIBER REINFORCED POLYMER COMPOSITE SHEETS AND PRODUCT THEREOF

(51) International classification	:C08L0051060000, B29C0039000000, C08K0007020000, B29K0201000000, E04C0005070000	(71)Name of Applicant : 1)Dr. PAULMONY THARMARAJ Address of Applicant :PG AND RESEARCH DEPARTMENT OF CHEMISTRY, THIAGARAJAR COLLEGE, MADURAI TAMIL NADU INDIA 625009 Tamil Nadu India 2)Dr. JUSTUS SHAKINA
(31) Priority Document No	:NA	(72)Name of Inventor : 1)Dr. PAULMONY THARMARAJ 2)Dr. JUSTUS SHAKINA 3)Mrs. THANGASAMY SAHAYA MARIA JEYASEELI
(32) Priority Date	:NA	
(33) Name of priority country	:NA	
(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	

(57) Abstract :

APPLICANT: Dr. PAULMONY THARMARAJ AND Dr. JUSTUS SHAKINA TITLE: A PROCESS OF PREPARATION OF NATURAL FIBER REINFORCED POLYMER COMPOSITE SHEETS AND PRODUCT THEREOF ABSTRACT The present invention discloses a process of preparation of natural fiber reinforced polymer composite sheets for use as sound proof and damping control materials. The process of the present invention comprises of following step; (a) preparation of hydroxylated triglyceride oil comprising of mixing predetermined volume of triglyceride oil and predetermined volume of formic acid in a predetermined ratio under vigorous stirring at predetermined temperature followed by slowly adding predetermined volume of hydrogen peroxide under continues stirring for predetermined time with predetermined temperature to form a residue which is extracted plurality of times with predetermined volume of diethyl ether and separating organic layer followed by drying over anhydrous sodium sulphate and filtering solvent diethyl ether and evaporating to form hydroxylated triglyceride oil; (b) preparation of poly (triglyceride oil fumarate) polyester resin comprising of blending predetermined volume of the formed hydroxylated triglyceride oil with predetermined volume and concentration of maleic anhydride in predetermined temperature and heating to predetermined temperature for predetermined time followed by adding catalytic amount of morpholine base upon vigorous blending to form poly (triglyceride oil fumarate) polyester resin; (c) preparation of natural fiber reinforced polymer composite comprises of adding predetermined volume of the formed poly (triglyceride oil fumarate) polyester resin with predetermined volume of monomer and natural fiber in predetermined ratio and treated with catalytic amount of benzoyl peroxide as a free radical initiator and N, N-dimethylaniline as an accelerator followed by vigorous stirring for predetermined time to form natural fiber reinforced polymer composite; (d) Preparation of natural fiber reinforced polymer composite sheets comprises of pouring the formed natural fiber reinforced polymer composite onto a mould spread out with silicon oil and obtaining natural fiber reinforced polymer composite sheets of predetermined size by compression molding technique. The present invention also discloses a natural fiber reinforced polymer composite sheets for use as sound proof and damping control materials prepared by the process described above.

No. of Pages : 26 No. of Claims : 10



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



भारत सरकार
GOVERNMENT OF INDIA

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बौद्धिक सम्पदा भवन / I.P.O. BUILDING
जी.एस.टी. रोड, गिन्दी 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
वेबसाइट/Website: http://ipindia.nic.in

सं. \ No. 202241044350

दिनांक \ Dated the 08/01/2024

सेवा में, \ To :

Address of Service:- Altacit Global, C2-A, Industrial estate, Guindy, Chennai-600032.
Email Id:- ip@altacit.com, info@altacit.com

विषय :- पेटेंट आवेदन संख्या 202241044350 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. 202241044350

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 ----- की हुई सुनवाई] के उपरांत एतद्वारा पेटेंट अनुदान किया जाता है। तथा पेटेंट अनुदान की प्रविष्टि 08/01/2024 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 -----] a patent is hereby granted and recorded in the Register of Patents on the 08/01/2024. The Patent Certificate is enclosed herewith.

पेटेंट संख्या \ Patent No	: 496079
आवेदक का नाम \ Name Of Applicant	: THIAGARAJAR COLLEGE
पेटेंट दिनांक \ Date of Patent	: 03/08/2022
पूर्विका तिथि \ Priority Date	: 03/08/2022
परीक्षण हेतु अनुरोध दाखिल करने की तिथि \ Filing date of Request for examination	: 16/09/2022
शीर्षक \ Title	: BIOREMEDIATION OF PICKLE INDUSTRY EFFLUENT USING EFFECTIVE MICROORGANISMS TM AND METHOD THEREOF
दावों की संख्या \ Number of claims	: 4 claims available under the head "202241044350-COMplete SPECIFICATION [31-03-2023 (online)].pdf".
Controller' Name	: Dr. AHILAN B
Controller' Email	: ahilanb.ipo@nic.in
Controller' Location	: Ahmedabad

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.

Dr. AHILAN B

(नियंत्रक पेटेंट)

Controller of Patents

ध्यान / Note :

संशोधित नवीकरण शुल्क हेतु कृपया महानियंत्रक पेटेंट, अभिकल्प एवं व्यापार चिह्न की आधिकारिक वेबसाइट www.ipindia.gov.in पर उपलब्ध पेटेंट (संशोधन) नियम 2016 की नम 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

कार्यालय द्वारा पेटेंट प्रमाणपत्र की कोई भी कागची प्रति अलग से जारी नहीं की जाएगी।

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



Office of the Controller General of Patents, Designs & Trade Marks
 Department of Industrial Policy & Promotion,
 Ministry of Commerce & Industry,
 Government of India

(<http://ipindia.nic.in/index.htm>)



(<http://ipindia.nic.in/index.htm>)

Application Details	
APPLICATION NUMBER	202241044350
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	03/08/2022
APPLICANT NAME	THIAGARAJAR COLLEGE
TITLE OF INVENTION	BIOREMEDIATION OF PICKLE INDUSTRY EFFLUENT USING EFFECTIVE MICROORGANISMS TM AND METHOD THEREOF
FIELD OF INVENTION	CHEMICAL
E-MAIL (As Per Record)	ip@altacit.com
ADDITIONAL-EMAIL (As Per Record)	info@altacit.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	16/09/2022
PUBLICATION DATE (U/S 11A)	23/09/2022

Application Status	
APPLICATION STATUS	FER Issued, Reply not Filed

				View Documents
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Filed RQ Filed Published Under Examination Disposed

In case of any discrepancy in status, kindly contact ipo-helpdesk@nic.in

9	Dr. K. Lingaraja Assistant Professor,	Application No : 202041024596 A	ISPT-Mobile Banking : Intelligent and Secured Payment transfer using 4-G, 5-G Mobile Banking	Published on 26.06.2020
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Department of Business Adminstration			
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पेटेंट कार्यालय
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**OFFICIAL JOURNAL
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DATE: 26/06/2020

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PUBLICATION OF THE PATENT OFFICE

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202041024596 A

(19) INDIA

(22) Date of filing of Application :11/06/2020

(43) Publication Date : 26/06/2020

(54) Title of the invention : ISPT- MOBILE BANKING: INTELLIGENT AND SECURED PAYMENT TRANSFER USING 4-G,5-G MOBILE BANKING.

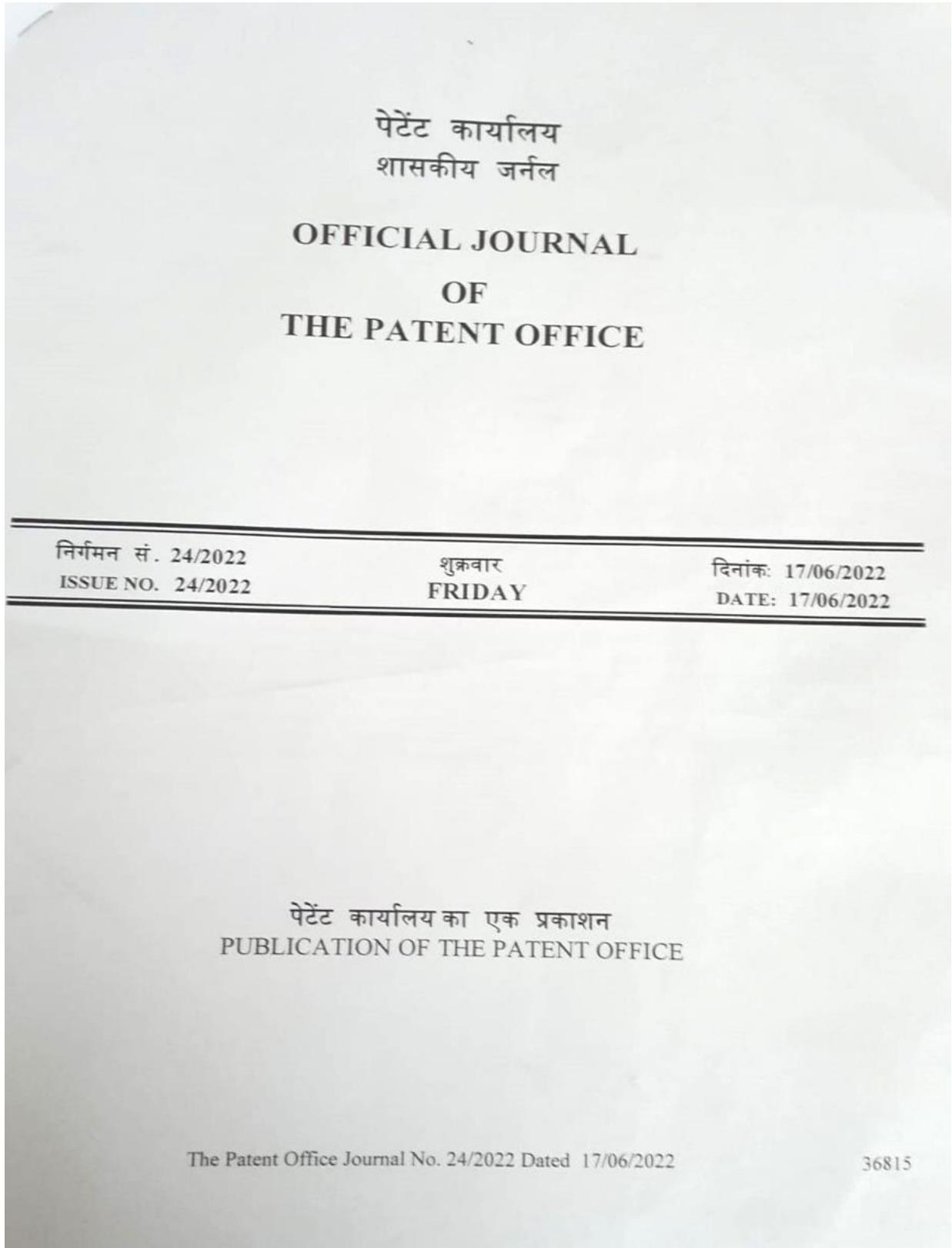
(51) International classification	:G06Q 20/32	(71)Name of Applicant : 1)DR. K. LINGARAJA (ASSISTANT PROFESSOR) Address of Applicant :DEPARTMENT OF BUSINESS ADMINISTRATION, THIAGARAJAR COLLEGE, MADURAI- 625009, TAMIL NADU, INDIA. E-Mail: klingarajaphd@gmail.com Tamil Nadu India
(31) Priority Document No	:NA	2)DR. V. RAMANUJAM (ASSOCIATE PROFESSOR)
(32) Priority Date	:NA	3)DR. D. NAPOLEON (ASSISTANT PROFESSOR)
(33) Name of priority country	:NA	4)DR. T. VISWANATHAN (ASSISTANT PROFESSOR)
(86) International Application No	:NA	5)DR. MARXIA OLI. SIGO (ASSISTANT PROFESSOR)
Filing Date	:NA	(72)Name of Inventor :
(87) International Publication No	:NA	1)DR. K. LINGARAJA (ASSISTANT PROFESSOR)
(61) Patent of Addition to Application Number	:NA	2)DR. V. RAMANUJAM (ASSOCIATE PROFESSOR)
Filing Date	:NA	3)DR. D. NAPOLEON (ASSISTANT PROFESSOR)
(62) Divisional to Application Number	:NA	4)DR. T. VISWANATHAN (ASSISTANT PROFESSOR)
Filing Date	:NA	5)DR. MARXIA OLI. SIGO (ASSISTANT PROFESSOR)

(57) Abstract :

Patent Title: ISPT- Mobile Banking: INTELLIGENT AND SECURED PAYMENT TRANSFER USING 4-G,5-G MOBILE BANKING. ABSTRACT The invention ISPT- Mobile Banking is a concerns a technology of making a secure payment transaction by a customer including all steps of receiving, by a 3G,4G,5G mobile device of the customer, merchant data; transmitting, by the 3G,4G,5G mobile device to a local server, a payment transaction request including the merchant data; determining, by the local server. The authorized customer based secure request and the identity of the merchant based on the data; and implementing the payment transaction between bank accounts of the customer and the merchant. The 3G,4G,5G mobile device is selected as the mode of payment for said payment transaction by positioning said 3G,4G,5G mobile device within secure communication range of said point of sale equipment. The step of transmitting said merchant data to said local server comprises establishing a video call between said 3G,4G,5G mobile device and said local server, wherein images of said visual token are captured by said camera of said 3G,4G,5G mobile device and transmitted to said local server as part of said video call and producing said visual token, wherein said visual data further encodes transaction details relating to said payment transaction.

No. of Pages : 19 No. of Claims : 9

10	Dr. P. Manickam Assistant Professor, Department of Computer Science	Application No : 202241027248	An Embedded Prime Lightweight block cipher for smart devices	Published on 17.06.2022
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(12) PATENT APPLICATION PUBLICATION

(21) Application No.202241027248 A

(19) INDIA

(22) Date of filing of Application :11/05/2022

(43) Publication Date : 17/06/2022

(54) Title of the invention : An Embedded Prime LightWeight Block Cipher for Smart Devices

(51) International classification :H04L0029080000, H04W0004700000, H04L0029060000, H04L0009060000, H04L0009300000

(86) International Application No :PCT//
Filing Date :01/01/1900

(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)Dr.P.Manickam

Address of Applicant :Asst. Professor, Dept. of Computer Science, Thiagarajar College, Madurai-625009, Tamil Nadu, India. -----

2)Ms.M.Girija

3)Dr.M.Ramaswami

Name of Applicant : NA

Address of Applicant : NA

(72)Name of Inventor :

1)Dr.P.Manickam

Address of Applicant :Asst. Professor, Dept. of Computer Science, Thiagarajar College, Madurai-625009, Tamil Nadu, India. -----

2)Ms.M.Girija

Address of Applicant :Asst. Professor, Dept. of Computer Science, The American College, Madurai-625009, Tamil Nadu, India. -----

3)Dr.M.Ramaswami

Address of Applicant :Professor Department of Computer Applications, Madurai Kamaraj University, Madurai, Tamilnadu, India. -----

(57) Abstract :

Lightweight cryptography (LWC) is a compact and advancing cryptography protocol. Internet of Things (IoT) is a cutting edge technology which is developed for resource constrained devices for communicating and sharing of information among fellow devices over internet. IoT smart objects are smallest tiny devices and it has limited processing and storage capacities and that often runs on small, low power, battery. IoT devices have many issues and challenges due to inherent properties of IoT and one of the major challenges is security. Success of IoT depends on how smart devices countermeasure the different security attacks. There are many cryptographic algorithms with different services are exist. Each one has some unique properties as well as limitations or constraints. After studying these cryptographic algorithms, the authors decided to propose a new lightweight block cipher, PriPresent. Also, this paper depicts the comparison results of proposed cipher with existing cipher over different metrics.

No. of Pages : 25 No. of Claims : 1

11	Dr. C. Karthikeyan, Assistant Professor, Dept. of Biotechnology	Application No : 202341027779 A	Artificial Intelligence based approach to analyse the impact of green gold nanoparticles in cancer therapy and diagnosis	Published on 05.05.2023
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(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341027779 A

(19) INDIA

(22) Date of filing of Application :14/04/2023

(43) Publication Date : 05/05/2023

(54) Title of the invention : ARTIFICIAL INTELLIGENCE BASED APPROACH TO ANALYSE THE IMPACT OF GREEN GOLD NANOPARTICLES IN CANCER THERAPY AND DIAGNOSIS

<p>(51) International classification :A61B 010600, A61K 390000, A61K 410000, A61P 350000, G06N 070000</p> <p>(86) International Application No :PCT//</p> <p>Filing Date :01/01/1900</p> <p>(87) International Publication No :NA</p> <p>(61) Patent of Addition to Application Number :NA</p> <p>Filing Date :NA</p> <p>(62) Divisional to Application Number :NA</p> <p>Filing Date :NA</p>	<p>(71)Name of Applicant :</p> <p>1)Dr.R.E.Ugandar Address of Applicant :Professor and Head,Department of Pharmacy Practice,Santhiram College of Pharmacy,NH-40., Nerawada(V&Po.),Panyam(M). Nandyal -----</p> <p>2)R.Ganesh 3)Sayali Lokhande 4)A.P. Uvareka 5)Ingilela Ravi shireesh 6)Dr.C.Karthikeyan 7)Nadendla Anil Kumar Chowdari 8)Dr Alla Srivani 9)Nadeem Siddiqui 10)Mr. Parthiv Jasti 11)Mr. Manish G. Baheti 12)Yukti Varshusy</p> <p>Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor :</p> <p>1)Dr.R.E.Ugandar Address of Applicant :Professor and Head,Department of Pharmacy Practice,Santhiram College of Pharmacy,NH-40., Nerawada(V&Po.),Panyam(M). Nandyal -----</p> <p>2)R.Ganesh Address of Applicant :Assistant Professor, Computer science and Engineering (AI &ML), Institute of Aeronautical Engineering, Hyderabad-500043 Hyderabad -----</p> <p>3)Sayali Lokhande Address of Applicant :Student, Indian Institute of Technology, Dharwad, WALMI Campus, Near High Court, Dharwad, Karnataka-580011. Dharwad -----</p> <p>4)A.P. Uvareka Address of Applicant :Assistant Professor/ Computer Science and Applications, Vivekanandha College of Arts and Sciences for Women (Autonomous), Tiruchengode, 637 205 Rasipuram -----</p> <p>5)Ingilela Ravi shireesh Address of Applicant :Associate professor / computer science and engineering , Audisankara college of engineering and technology, Gudur,524101 Gudur -----</p> <p>6)Dr.C.Karthikeyan Address of Applicant :Assistant Professor, Department of Biotechnology, Thiagarajar College, Teppakulam, Madurai - 625 009 Madurai -----</p> <p>7)Nadendla Anil Kumar Chowdari Address of Applicant :Asst.Professor/CSE, Audisankara College of Engineering and Technology ,Gudur,524001 Gudur -----</p> <p>8)Dr Alla Srivani Address of Applicant :INUP Post Doctoral Researcher/VVIT, Guntur, 522006 Guntur -----</p> <p>9)Nadeem Siddiqui Address of Applicant :Associate Professor, Department of Biotechnology, Vaddeswaram, KLEF Deemed to be University, 522502, Andhra Pradesh Vaddeswaram -----</p> <p>10)Mr. Parthiv Jasti Address of Applicant :UG Scholar, Department of CSE, VNR VJIEI, Bachupally, Hyderabad, Hyderabad -----</p> <p>11)Mr. Manish G. Baheti Address of Applicant :Assistant Professor, School of Pharmacy, G H Raisoni University, Saikheda MP, 480337 Saikheda -----</p> <p>12)Yukti Varshusy Address of Applicant :Assistant Professor,Department of Computer Science & Engineering, Moradabad Institute of Technology, Moradabad,244001, U.P. Moradabad -----</p>
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(57) Abstract :
Artificial Intelligence based approach to analyse the Impact of Green Gold Nanoparticles in Cancer Therapy and Diagnosis is the proposed invention. The invention focuses on analyzing the role of Green Gold Nanoparticles in cancer therapy. The proposed invention aims at accurate diagnosis of cancer.

No. of Pages : 14 No. of Claims : 4

12	Dr. N. Gnanasekaran & Dr. G. Rakesh Assistant Professors, Dept. of Computer Science	202321027527 A	IOT based secure and emergency communication between electric vehicle and rescue team	12.05.2023
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शासकीय जर्नल

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(12) PATENT APPLICATION PUBLICATION

(21) Application No.202321027527 A

(19) INDIA

(22) Date of filing of Application :14/04/2023

(43) Publication Date : 12/05/2023

(54) Title of the invention : IOT BASED SECURE AND EMERGENCY COMMUNICATION BETWEEN ELECTRIC VEHICLE AND RESCUE TEAM

(51) International classification	:G08B 250000, G08B 250100, H04L 671200, H04W 049000, H04W 765000
(86) International Application No	:NA
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(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)Mr. Rafik Jamil Shaikh
Address of Applicant :Assistant Professor, Computer Application, G H Raisoni Institute Of Engineering And Business Management, Jalgaon - 425002, Maharashtra, India Jalgaon -----

2)Dr. N. Gnana-sankaran
3)Dr. G. Rakesh
4)Dr. M. Loganathan
5)Prof. Biraslapati Doraswamy
6)Mrs. G. Malathi
7)Mr. B. M. S. Sreenivasa Rao
8)Mr. M. Kathiresan
9)Ms. K. Samundeeswari
10)Mrs. Pooja Kumari Singh
11)P. Divahar
12)Dr. M. Bharathi
13)Dr. V. Kannan
14)Mr. J. Logeshwaran
Name of Applicant : NA
Address of Applicant : NA

(72)Name of Inventor :

1)Mr. Rafik Jamil Shaikh
Address of Applicant :Assistant Professor, Computer Application, G H Raisoni Institute Of Engineering And Business Management, Jalgaon - 425002, Maharashtra, India Jalgaon -----

2)Dr. N. Gnana-sankaran
Address of Applicant :Assistant Professor, Computer Science, Thiagarajar College, Madurai - 625009, Tamil Nadu, India Madurai -----

3)Dr. G. Rakesh
Address of Applicant :Assistant Professor, Computer Science, Thiagarajar College, Madurai - 625009, Tamil Nadu, India Madurai -----

4)Dr. M. Loganathan
Address of Applicant :Associate Professor, Mechanical Engineering, M.Kumarasamy College Of Engineering, Karur - 639113, Tamilnadu, India Karur -----

5)Prof. Biraslapati Doraswamy
Address of Applicant :Professor, Electrical & Computer Engineering, College Of Engineering & Technology, Bule Hora University, Bule Hora, Ethiopia -----

6)Mrs. G. Malathi
Address of Applicant :Assistant Professor, Computer Science And Engineering, Sri Sairam Institute Of Technology, Chennai - 600044, Tamilnadu, India Chennai -----

7)Mr. B. M. S. Sreenivasa Rao
Address of Applicant :Assistant Professor, Electronics And Communication Engineering, GMR Institute Of Technology, Rajam - 532127, Andhra Pradesh, India Rajam -----

8)Mr. M. Kathiresan
Address of Applicant :Mechanical Engineering, Paavai College Of Engineering, Salem - 636004, Tamil Nadu, India Salem -----

9)Ms. K. Samundeeswari
Address of Applicant :Associate Professor, IT, Mohamed Sathak Engineering College, Kilakarai - 623806, Tamilnadu, India Kilakarai -----

10)Mrs. Pooja Kumari Singh
Address of Applicant :Research Scholar, Faculty Of Engineering & Technology, Invertis University, Bareilly - 243123, Uttar Pradesh, India Bareilly -----

11)P. Divahar
Address of Applicant :Research Scholar, Department Of Plastic Technology, Central Institute Of Petrochemical Engineering And Technology, Chennai - 621216, Tamilnadu, India Chennai -----

12)Dr. M. Bharathi
Address of Applicant :Assistant Professor Aeronautical Engineering KIT Kalaignar karunanidhi Institute Of Technology, Coimbatore - 641103, Tamilnadu, India Coimbatore -----

13)Dr. V. Kannan
Address of Applicant :Managing Director, CLDC Research And Development No.997, Mettupalayam Road, Near X-Cut Signal, R.S.Puram, Coimbatore - 641002, Tamil Nadu, India Coimbatore -----

14)Mr. J. Logeshwaran
Address of Applicant :Research Scholar, Department Of Electronics And Communication Engineering, Sri Eshwar College Of Engineering, Coimbatore, Tamil Nadu, India Coimbatore -----

(57) Abstract :

The Internet of Things (IoT) has revolutionized the way in which we communicate with each other and the environment around us. IoT technology has enabled us to securely and quickly communicate with each other in real time, regardless of where we are. As a result, the potential for communication between electric vehicles and rescue teams has become a reality. The ability for an electric vehicle and a rescue team to communicate in real time can help to ensure the safety of both parties. For example, an electric vehicle could alert a rescue team to any potential hazards, such as an impending collision, a roadblock, or an emergency. This would allow the rescue team to respond quickly and help to prevent any further harm. In addition, the secure communication between a rescue team and an electric vehicle can help to ensure that the vehicle is monitored properly. A rescue team can be alerted of any potential issues or faults with the vehicle, and can take appropriate action. This can help to reduce the risk of accidents, as well as increase the reliability of the vehicle. Furthermore, the secure communication between an electric vehicle and a rescue team can be used to notify the rescue team of any medical emergencies. This is especially important for electric vehicles that are used by people with medical conditions, as the rescue team can be alerted to any medical emergencies and can quickly respond. Finally, the secure communication between an electric vehicle and a rescue team can be used to provide the rescue team with critical information about the vehicle and its occupants. This can include information about the occupants' medical history, as well as the location of the vehicle and its occupants. This can help the rescue team to locate and rescue the occupants quickly and efficiently.

No. of Pages : 10 No. of Claims : 9

13	Dr. S. Urmila Assistant Professor,	202241035991 A	Real-time multi-face attendance evaluation with an interactive APP	26.05.2023
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पेटेंट कार्यालय
शासकीय जर्नल

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PUBLICATION OF THE PATENT OFFICE

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(71)Name of Applicant :

1)T.S.Urmila

Address of Applicant :Assistant Professor, Thiagarajar College

Name of Applicant : NA

Address of Applicant : NA

(72)Name of Inventor :

1)T.S.Urmila

Address of Applicant :Assistant Professor, Thiagarajar College
Madurai -----

(57) Abstract :

Managing attendance can be tedious when done exclusively through traditional methods such as calling out roll calls or taking signatures. The issue can be addressed by implementing a smart and authenticated attendance system. A smart attendance system uses biometrics such as face recognition, fingerprint recognition, DNA recognition, iris recognition, and hand geometry. Faces are recognized because of their unique features. Several real-life applications require face recognition technology. The attendance system of this invention is based on face recognition and prediction using an interactive app for real-time attendance evaluation of students. In the beginning, all the information including department, academic, staff and students are stored and the students' facial images are uploaded to the server along with unique IDs. The staff's credentials will be used to capture real-time images using the Interactive App, which will be transmitted through the server to generate the AI model (KNN Classifier) for prediction. The images are matched with the faces in the student dataset and the attendance is marked by sending a notification. Figure 1 describes the abstract specification.

No. of Pages : 12 No. of Claims : 6

14	<p>1) Dr. Rm. Murugappan, Head & Associate Professor, Dept. of Zoology & Microbiology &</p> <p>2) Dr. M. Karthikeyan Assistant Professor, Dept. of Zoology & Microbiology,</p> <p>3) Ms. B.R. Harisma, Research Scholar,</p> <p>4) Ms. J. Jennifer Annis Christy Research Scholar Dept. of Zoology & Microbiology</p>	Application No. : 392872-001	Wireless based Cardiac blood clot tester	Applied on 16.08.2023
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Controller General of Patents, Designs & Trade Marks
CP-2, Sector V, Salt Lake City, Kolkata-700091
Tel No. (091)(033) 23671945-46 Fax No. 033 23671988
E-mail: kolkata-patent@nic.in
Web Site: www.ipindia.gov.in



सत्यमेव जयते

G.A.R.6
[See Rule 22(1)]
RECEIPT



Date/Time 17/08/2023

To
T Sahila

User Code: Sahila

User Name: T Sahila

20-20 D, Main Road Kinnikannan Vilai
Agasteeswar am Post Kanyakumari

CBR Detail:

Sr. No.	Ref. No./Application No.	App. Number	Amount Paid	C.B.R. No.	Form Name	Remarks
1	392872-001		1000	210262	FORM 1	WIRELESS IOT BASED CARDIAC BLOOD CLOT TESTER
2	392873-001		1000	210262	FORM 1	Soldiers Tracking and Rescue System
3	392874-001		1000	210262	FORM 1	RFID BASED WAREHOUSE ROBOT

TransactionID	Payment Mode	Challan Identification Number	Amount Paid	Head of A/C No
D-0000062601	Online Bank Transfer	1708230000352	3000.00	1475001020000001

Total Amount: ₹ 3000

Amount in Words: Rupees Three Thousand Only

Received from T Sahila the sum of ₹ 3000 on account of Payment of fee for above mentioned Application/Forms.

* This is a computer generated receipt, hence no signature required.

FORM 1**Application for Registration of Design**

[See section 5 and 44]

You are requested to register the accompanying design in:

Sr.	Class	Sub Class	Articles
1	24-00-Medical and laboratory equipment	24-02-MEDICAL INSTRUMENTS, INSTRUMENTS AND TOOLS FOR LABORATORY USE	WIRELESS IOT BASED CARDIAC BLOOD CLOT TESTER

In the name of :

Sr.	Name	Nationality	Address
1	Dr. RM. MURUGAPPAN	India	Head and Associate professor, Zoology and Microbiology, Thiagarajar College, Madurai, Tamil Nadu-625
2	Dr. M. KARTHIKEYAN	India	Assistant professor, Zoology and Microbiology, Thiagarajar College, Madurai, Tamil Nadu-625009
3	B.R. HARISMA	India	Research Scholar, Zoology and Microbiology, Thiagarajar College, Madurai, Tamil Nadu-625009
4	J. JENIFER ANNIS CHRISTY	India	Research Scholar, Zoology and Microbiology, Thiagarajar College, Madurai, Tamil Nadu-625009

who claim(s) to be the proprietor(s) thereof.

Four exactly similar representations of the design accompanying this request.

The design is to be applied to **WIRELESS IOT BASED CARDIAC BLOOD CLOT TESTER,**

Address for Service in India is:

Dr. RM. MURUGAPPAN Head and Associate professor,

**Zoology and Microbiology, Thiagarajar College,
Madurai, Tamil Nadu-625009**

Email ID: **arinnapatent@gmail.com**

Mobile No: **9865889000**

Declaration:

The applicant(s) claims to be the proprietor(s) of the design and that to the best of his knowledge and belief the design is new or original.

Dated this 16 day of August 2023



SIGNATURE

T Sahila

To,
The Controller of Patents & Designs,
The Patent Office Kolkata

This form is electronically generated.