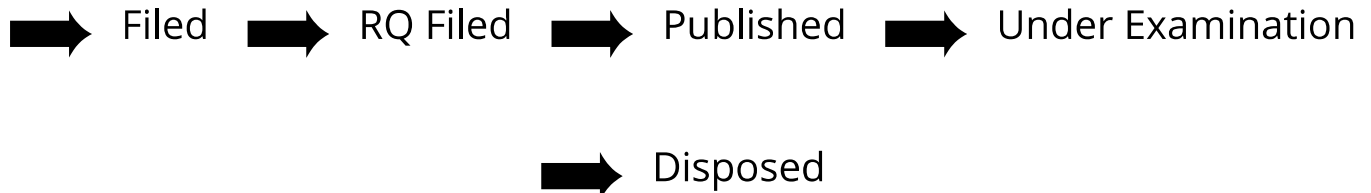


Application Details

APPLICATION NUMBER	599/KOL/2010
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	01/06/2010
APPLICANT NAME	West Bengal University of Technology
TITLE OF INVENTION	Microbial Enzymes As Detergent Additives
FIELD OF INVENTION	CHEMICAL
E-MAIL (As Per Record)	
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E-MAIL (UPDATED Online)	manisha@lexorbis.com
PCT INTERNATIONAL APPLICATION NUMBER	
PCT INTERNATIONAL FILING DATE	01/06/2010
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	22/11/2012
PUBLICATION DATE (U/S 11A)	02/09/2016
REPLY TO FER DATE	13/04/2018

Application Status

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Application Details

APPLICATION NUMBER	863/KOL/2010
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	05/08/2010
APPLICANT NAME	West Bengal University of Technology
TITLE OF INVENTION	HIDE PROCESSING METHODS AND COMPOSITIONS
FIELD OF INVENTION	MECHANICAL ENGINEERING
E-MAIL (As Per Record)	
ADDITIONAL-EMAIL (As Per Record)	mail@lexorbis.com
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PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	01/07/2014
PUBLICATION DATE (U/S 11A)	02/09/2016

Application Status

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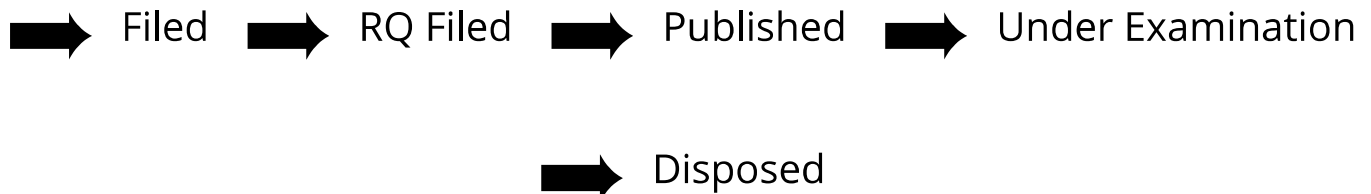
 Filed
  RQ Filed
  Published
  Under Examination
 Disposed

Application Details

APPLICATION NUMBER	789/KOL/2011
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	10/06/2011
APPLICANT NAME	West Bengal University of Technology
TITLE OF INVENTION	Self-Sustained Microbial Detoxification Of Soluble Sulfate From Environmental Effluent
FIELD OF INVENTION	PHARMACEUTICALS
E-MAIL (As Per Record)	
ADDITIONAL-EMAIL (As Per Record)	mail@lexorbis.com
E-MAIL (UPDATED Online)	manisha@lexorbis.com
PCT INTERNATIONAL APPLICATION NUMBER	
PCT INTERNATIONAL FILING DATE	10/06/2011
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	30/05/2015
PUBLICATION DATE (U/S 11A)	26/08/2016

Application Status

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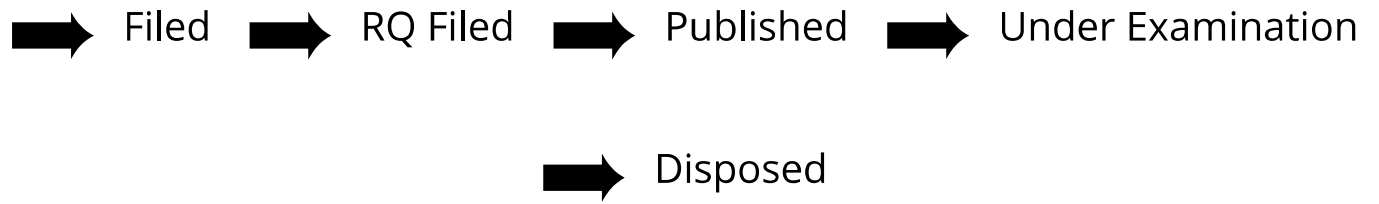
Application Details

APPLICATION NUMBER	203/KOL/2013
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	21/02/2013
APPLICANT NAME	CHAUDHURI RAY, Shaon
TITLE OF INVENTION	MICROBIAL COMBINATION FOR ENVIRONMENTAL PROTECTION AND AGRICULTURAL SUSTENANCE
FIELD OF INVENTION	BIOTECHNOLOGY
E-MAIL (As Per Record)	info@khuranaandkhurana.com
ADDITIONAL-EMAIL (As Per Record)	
E-MAIL (UPDATED Online)	docket@khuranaandkhurana.com,info@khuranaandkhuran
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	16/02/2015
PUBLICATION DATE (U/S 11A)	26/08/2016
FIRST EXAMINATION REPORT DATE	16/07/2018
Date Of Certificate Issue	28/09/2020
POST GRANT JOURNAL DATE	02/10/2020
REPLY TO FER DATE	04/01/2019

Application Status

APPLICATION STATUS	Granted Application, Patent Number :347939
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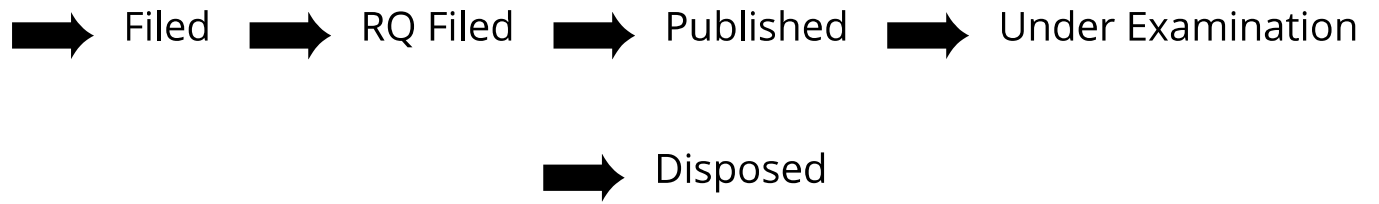
Application Details

APPLICATION NUMBER	1289/KOL/2013
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	13/11/2013
APPLICANT NAME	RAY CHAUDHURI, Shaon
TITLE OF INVENTION	METHOD OF TREATING SULPHATE CONTAINING WATER
FIELD OF INVENTION	CHEMICAL
E-MAIL (As Per Record)	info@khuranaandkhurana.com
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E-MAIL (UPDATED Online)	docket@khuranaandkhurana.com,info@khuranaandkhuran
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	16/02/2015
PUBLICATION DATE (U/S 11A)	26/08/2016
FIRST EXAMINATION REPORT DATE	21/03/2018
Date Of Certificate Issue	17/07/2020
POST GRANT JOURNAL DATE	24/07/2020
REPLY TO FER DATE	20/09/2018

Application Status

APPLICATION STATUS	Granted Application, Patent Number :341914
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US00PP26474P3

(12) **United States Plant Patent**
Lavania et al.

(10) **Patent No.:** **US PP26,474 P3**
(45) **Date of Patent:** **Mar. 8, 2016**

(54) **AUTOTETRAPLOID *VETIVERIA***
***ZIZANIODES* PLANT USEFUL FOR CARBON**
SEQUESTRATION AND SOIL
CONSERVATION NAMED ‘CIMAP-KH 40’

(50) Latin Name: *Vetiveria zizaniodes*
Varietal Denomination: **CIMAP-KH 40**

(75) Inventors: **Umesh Chandra Lavania**, Lucknow (IN); **Santosh Kumar Rai**, Lucknow (IN); **Seshu Lavania**, Lucknow (IN); **Surochita Basu**, Lucknow (IN); **Basant Kumar Dubey**, Lucknow (IN); **Ram Ujagir**, Lucknow (IN)

(73) Assignee: **Council of Scientific and Industrial Research**, New Delhi (IN)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 362 days.

(21) Appl. No.: **13/506,598**

(22) Filed: **Apr. 30, 2012**

(65) **Prior Publication Data**
US 2012/0278945 P1 Nov. 1, 2012

(30) **Foreign Application Priority Data**
Apr. 29, 2011 (IN) 1258/DEL/2011

(51) **Int. Cl.**
A01H 5/06 (2006.01)
A01H 5/12 (2006.01)
A01H 5/10 (2006.01)

(52) **U.S. Cl.**
USPC **Plt./384**
CPC ... **A01H 5/12** (2013.01); **A01H 5/10** (2013.01)

(58) **Field of Classification Search**
USPC **Plt./384**
See application file for complete search history.

(56) **References Cited**

PUBLICATIONS

U.C. Lavania, Enhanced productivity of the essential oil in the artificial autopolyploid of vetiver (*Vetiveria zizanioides* L. Nash), *Euphytica* 38: 271-276 (1988).*

U.C. Lavania, Enhanced productivity of the essential oil in the artificial autopolyploid of vetiver (*Vetiveria zizanioides* L. Nash), *Euphytica* 38: 271-276 (1988).*

U.C. Lavania, Evaluation of an Essential Oil Rich Autotetraploid Cultivar of Vetiver (*Vetiveria zizanioides* (L.) Nash), *Journal of Essential Oil Research*, vol. 3, Issue 6, CIMAP publication No. 45/91, p. 455-457, 1991.*

* cited by examiner

Primary Examiner — Anne Grunberg

(74) *Attorney, Agent, or Firm* — Ladas & Parry LLP

(57) **ABSTRACT**

The present invention relates to the development of a novel clone of Vetiver [*Vetiveria zizanioides* (L.) Nash. syn. *Chrysopogon zizanioides* (L.) Roberty; family Poaceae], named ‘CIMAP-KHUS 40’ characterised by somatic chromosome number 4x=40, larger stomata, fast growing deep penetrating roots, and seed infertility disabling its spread as a weed. This clone has unique ISSR and RAPD profiles that serve as DNA-fingerprints, and is developed from a unique diploid plant (2n=20). The invention document details all the pertinent data relating to this clone, its biological features and usefulness, and the method of its development.

3 Drawing Sheets

1

2

Botanical classification:

Latin name of the genus and species of the plant claimed:
Genus: *Vetiveria* (syn. *Chrysopogon*). Species: *zizanioides*.
Variety denomination: CIMAP-KH 40.

DESCRIPTION

Field of Invention

The present invention relates to the development and utility of a novel seed infertile autotetraploid clone of Vetiver [*Vetiveria zizanioides* (L.) Nash. syn. *Chrysopogon zizanioides* (L.) Roberty; family Poaceae], named CIMAP-KH 40 characterised by somatic chromosome number 4x=40, developed through genomic duplication of a unique diploid clone (2n=20) isolated from a cultivated area. The invention document details all the pertinent data relating to this clone, its biological features and usefulness, and the method of its development.

Background of Invention

The vetiver grass is an important candidate to address current environmental concerns and human well being. This grass traditionally used for extraction of essential oil, has attracted world attention as a natural inexpensive and practical means for its multifarious environmental applications, including conservation and detoxification of degraded soil and water, flood and landslide disaster mitigation (website of vetiver). Lately, Lavania U C and Lavania S (*Curr. Sci.* 97: 618-619, 2009) have proposed a “vetiver grass model” for sequestration of atmospheric carbon into subsoil horizons to mitigate global warming. However, for successful implementation of Vetiver grass for environmental applications it is desirable that such plantations meet the specific environmental objectives without any threat of becoming weedy through seed dispersal and trespassing the target areas. As such, the ideal plant type should have non-seeding habit suitable for eco-friendly plantations.

Vetiver, *Vetiveria zizanioides* is a perennial densely tufted C₄ grass native to India. The grass comprises of prolific clump

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Ministry of Industries
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No.(P&D)/Application (Issue)/ 1981

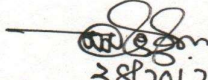
Dated: 24.10.17

Sub: Patent No.1005753.

The Letters Patent (LP) Patent No.1005753 has been issued
by the authority, the copy of which is enclosed herewith.

Your acknowledgement will be appreciated.

Encl: LP


(Md. Moznu Bhuyan)
Examiner (Patent)
(on behalf of Registrar, DPDT)

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Bangladesh.



GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH
DEPARTMENT OF PATENTS, DESIGNS AND TRADEMARKS



Letters Patent

Issue No. 1961

Date : 24.10.17

Patent No. : 1005753

Title of Invention : MICROBIAL CONSORTIUM FOR NITRATE AND PHOSPHATE SEQUESTRATION FOR ENVIRONMENTAL SUSTENANCE.

Filing Date : 14/10/2014

Priority no. & date : IN 1179/KOL/2013 Dated: 16/10/2013.

Proprietor(s) : RAY CHAUDHURI, Shaon, Nationality: Indian; Address: D/O Dr Dipali Ray Chaudhuri, Bimaldeep, 188/1 Michael Madhusudhan Dutta Road, New Barrackpur, Janakalyan Para, Kolkata- 700131, India.

Inventor(s) : (1) RAY CHAUDHURI, Shaon, Nationality: Indian;
(2) MUKHERJEE, Indranil, Nationality: Indian and
(3) THAKUR, Ashoke Ranjan, Nationality: Indian.

This is to certify that, in accordance with the provisions of the Patents & Designs Act 1911, a patent with the right to exclude others from making, selling or using the invention throughout Bangladesh or to import the same into Bangladesh for the term of this patent, subject to the payment of prescribed fees as provided by law has been granted to the Proprietor(s) for the titled invention.

(Md. Saidur Rahman)
Deputy Registrar (P & D)
Department of Patents, Designs & Trademarks.

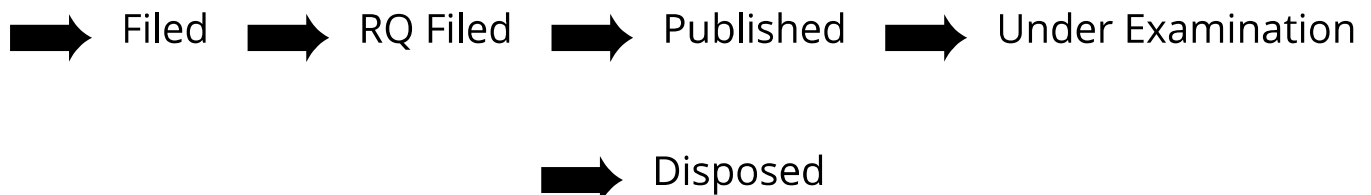
Application Details

APPLICATION NUMBER	201631003917
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	03/02/2016
APPLICANT NAME	RAY CHAUDHURI, Shaon
TITLE OF INVENTION	RAPID DETECTION OF IN-VIVO SENSITIVITY OF A MICROORGANISM TO AN ANTIMICROBIAL AGENT
FIELD OF INVENTION	MICRO BIOLOGY
E-MAIL (As Per Record)	docket@khuranaandkhurana.com
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E-MAIL (UPDATED Online)	docket@khuranaandkhurana.com,info@khuranaandkhuran
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	16/08/2017
PUBLICATION DATE (U/S 11A)	10/11/2017

Application Status

APPLICATION STATUS	FER Issued, Reply not Filed
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Department of Industrial Policy and Promotion
Ministry of Commerce and Industry

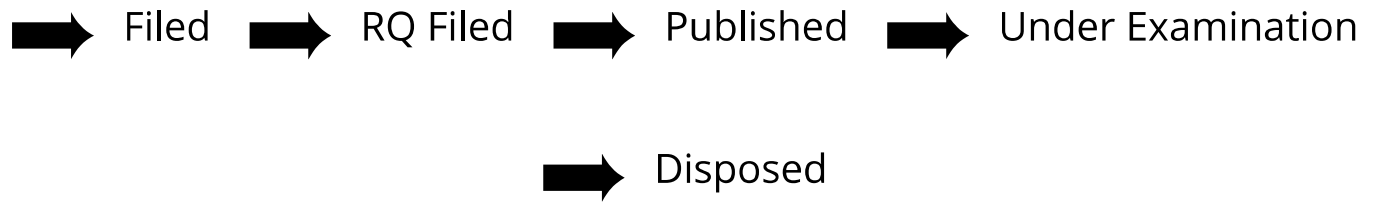
Application Details

APPLICATION NUMBER	1179/KOL/2013
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	16/10/2013
APPLICANT NAME	RAY CHAUDHURI, Shaon
TITLE OF INVENTION	MICROBIAL CONSORTIUM FOR NITRATE AND PHOSPHATE SEQUESTRATION FOR ENVIRONMENTAL SUSTENANCE
FIELD OF INVENTION	MICRO BIOLOGY
E-MAIL (As Per Record)	info@khuranaandkhurana.com
ADDITIONAL-EMAIL (As Per Record)	
E-MAIL (UPDATED Online)	docket@khuranaandkhurana.com,info@khuranaandkhuran
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	30/10/2013
PUBLICATION DATE (U/S 11A)	22/11/2013
FIRST EXAMINATION REPORT DATE	22/01/2018
Date Of Certificate Issue	13/11/2020
POST GRANT JOURNAL DATE	20/11/2020
REPLY TO FER DATE	20/07/2018

Application Status

APPLICATION STATUS	Granted Application, Patent Number :351564
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[Order\(s\)/Decision\(s\)](#)
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Application Details

APPLICATION NUMBER	202011006936
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	18/02/2020
APPLICANT NAME	1 . PROF.(DR.) PAWAN KUMAR BHARTI (VICE CHANCELLOR SHRI VENKATESHWARA UNIVERSITY) 2 . DR. RAKESH KUMAR YADAV (DIRECTOR- KCCITM) 3 . DR. NEERAJ KUMAR MISRA (ASSOCIATE PROFESSOR) 4 . DR ANIL KUMAR SAHU (ASSOCIATE PROFESSOR) 5 . JAYANTA PAL (ASSISTANT PROFESSOR) 6 . DR.C.M.JOSHI (DIRECTOR) 7 . PROF. DR. BIPLAB KUMAR SARKAR (FOUNDER- GEH RESEARCH LLP)
TITLE OF INVENTION	RWO-MOBILE CACHE MEMORY: ADVANCED TECHNIQUES READ AND WRITE OPERATIONS ON MOBILE CACHE MEMORY.
FIELD OF INVENTION	COMPUTER SCIENCE
E-MAIL (As Per Record)	dr.bksarkar2003@yahoo.in
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E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	28/02/2020

Application Status

APPLICATION STATUS

Awaiting Request for Examination

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Application Details

APPLICATION NUMBER	201731003023
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	27/01/2017
APPLICANT NAME	CHAUDHURI, Shaon Ray
TITLE OF INVENTION	BIO-FERTILIZER PRODUCTION FROM BACTERIAL CONSORTIUM
FIELD OF INVENTION	BIOTECHNOLOGY
E-MAIL (As Per Record)	info@khuranaandkhurana.com
ADDITIONAL-EMAIL (As Per Record)	info@khuranaandkhurana.com
E-MAIL (UPDATED Online)	docket@khuranaandkhurana.com,info@khuranaandkhuran
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	08/10/2020
PUBLICATION DATE (U/S 11A)	31/01/2020

Application Status

APPLICATION STATUS	Application Awaiting Examination
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