पेटेंट कार्यालय
शासकीय जर्नल

OFFICIAL JOURNAL
OF
THE PATENT OFFICE

निर्गमन सं. 51/2023	शुक्रवार	दिनांक: 22/12/2023
ISSUE NO. 51/2023	FRIDAY	DATE: 22/12/2023

पेटेंट कार्यालय का एक प्रकाशन
PUBLICATION OF THE PATENT OFFICE

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :21/11/2023

(21) Application No.202341078890 A

(43) Publication Date : 22/12/2023

(54) Title of the invention : GREEN SYNTHESIS AND CHARACTERIZATION OF ZINC OXIDE NANOPARTICLES USING VICOA INDICA LEAF EXTRACT AS UV-PROTECTION AND ANTIBACTERIAL ACTIVITY ON TEXTILE FABRICS

(51) International classification :C01G0009020000, D06M0101060000, B82Y0030000000, B01J0035020000, A61Q0017040000

(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)Dr.K.CHRISTIE JENNIFER
Address of Applicant :Head Of the Department, Department of Textile and Fashion Designing, Excel College for Commerce and Science, Komarapalayam, Namakkal -Dt,637 303, Tamilnadu, India. ---------- ----------
2)S N PRIYADHARSHINI
3)V.VANIPRIYA
4)M.DEEPIKA
5)P.RAMAPRIYA
6)P.GOWRI
7)SHRIMATHI V A
8)G KUMARESAN
9)S.GOPIKRISHNA
10)K.PUNITHA
11)K.P.THEEPIKA
12)G.RAMYA
Name of Applicant : NA
Address of Applicant : NA
(72)**Name of Inventor :**
1)Dr.K.CHRISTIE JENNIFER
Address of Applicant :Head Of the Department, Department of Textile and Fashion Designing, Excel College for Commerce and Science, Komarapalayam, Namakkal -Dt,637 303, Tamilnadu, India. ---------- ----------
2)S N PRIYADHARSHINI
Address of Applicant :Assistant Professor/Department of Textile and Fashion Designing, Excel College for Commerce and Science, Komarapalayam, Namakkal Dt-637303, Tamilnadu, India. ---------- ----------
3)V.VANIPRIYA
Address of Applicant :Assistant Professor/Textile and Fashion Designing, Excel College for Commerce and Science, Komarapalayam, Namakkal,637303, Tamilnadu, India. ---------- ----------
4)M.DEEPIKA
Address of Applicant :Assistant Professor/Costume Design and Fashion, Excel College for Commerce and Science, Komarapalayam, Namakkal-637303, Tamilnadu, India. ---------- ----------
5)P.RAMAPRIYA
Address of Applicant :Assistant Professor/Department of Textile and Fashion Designing, Excel College for Commerce and Science, Komarapalayam, Namakkal Dt-637303, Tamilnadu, India. ---------- ----------
6)P.GOWRI
Address of Applicant :Assistant Professor, Department of Costume Design and Fashion, Excel College for Commerce and Science, Komarapalayam, Namakkal District - 637303, Tamilnadu, India. ---------- ----------
7)SHRIMATHI V A
Address of Applicant :Assistant Professor, Department of Costume Design and Fashion, Excel College for Commerce and Science, Komarapalayam, Namakkal Dt-637303, Tamilnadu, India. ---------- ----------
8)G KUMARESAN
Address of Applicant :Assistant Professor, Department of Textile and Fashion Designing, Excel College for Commerce and Science, Komarapalayam, Namakkal Dt-637303, Tamilnadu, India. ---------- ----------
9)S.GOPIKRISHNA
Address of Applicant :Student/Textile and Fashion Designing, SSM College of Arts and Science, Komarapalayam, -638183, Tamilnadu, India. ---------- ----------
10)K.PUNITHA
Address of Applicant :Assistant Professor & Head/Costume Design and Fashion, Trinity College for Women, Namakkal,637002, Tamilnadu, India. ---------- ----------
11)K.P.THEEPIKA
Address of Applicant :Assistant Professor/Costume Design and Fashion, Trinity College for Women, Namakkal-637002, Tamilnadu, India. ---------- ----------
12)G.RAMYA
Address of Applicant :Assistant Professor/Costume Design and Fashion, Vivekanandha Arts and Science College for Women, Sankari, Salem-637303, Tamilnadu, India. ---------- ----------

(57) Abstract :
GREEN SYNTHESIS AND CHARACTERIZATION OF ZINC OXIDE NANOPARTICLES USING VICOA INDICA LEAF EXTRACT AS UV-PROTECTION AND ANTIBACTERIAL ACTIVITY ON TEXTILE FABRICS A method for the development of the synthesis and characterization of Nano sized Zinc Oxides particles and their application on cotton fabric have been studied for the protection against UV- radiation and antibacterial activity. The effectiveness of the treatment of green synthesis of ZnO nanoparticles by Vicoa Indica leaf extract treated on cotton fabrics. As prepared and green synthesized ZnO structure morphology changed by calcined at three different temperatures with three different plant concentration [2g:1000C, 4g:3000C and 6g:600 0C]. This paper mainly focuses on how to ZnO structure morphology influence in textile and antibacterial activities. This three different calcined ZnO Nano particle's structure morphology analyzed by scanning electron microscopy (SEM) and transmission electron microscopy (TEM). crystallites analyzed by X-ray diffraction (XRD). particle size analyzed by particle analyzer. The three different temperatures calcined ZnO nanoparticles coated on cotton fabric and subjected to UV protection and antibacterial studies.

No. of Pages : 10 No. of Claims : 1

COLLEGE FOR COMMERCE KOMARAPALAYAM 637 3 EXCEL

Dr. R. VIMAL NISHANT, M.Com., M.Phil., PH.D
PRINCIPAL
Excel College For Commerce And Science
Komarapalayam - 637 303