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पेटेंट कार्यालय का एक प्रकाशन  
PUBLICATION OF THE PATENT OFFICE

## **INTRODUCTION**

In view of the recent amendment made in the Patents Act, 1970 by the Patents (Amendment) Act, 2005 effective from 01<sup>st</sup> January 2005, the Official Journal of The Patent Office is required to be published under the Statute. This Journal is being published on weekly basis on every Friday covering the various proceedings on Patents as required according to the provision of Section 145 of the Patents Act 1970. All the enquiries on this Official Journal and other information as required by the public should be addressed to the Controller General of Patents, Designs & Trade Marks. Suggestions and comments are requested from all quarters so that the content can be enriched.

**( PROF. (DR) UNNAT P. PANDIT )  
CONTROLLER GENERAL OF PATENTS, DESIGNS & TRADE MARKS**

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(71)Name of Applicant :

**1)R. V. College of Engineering**

Address of Applicant :R. V. College of Engineering Mysore Road, R.V. Vidyaniketan post, Bengaluru - 560059, Karnataka, India. Bangalore -----

Name of Applicant : NA

Address of Applicant : NA

(72)Name of Inventor :

**1)Manjunatha C**

Address of Applicant :#1082, Sumukha, 2nd floor, 6th Main, BEML 3rd Stage, Rajarajeshwari Nagar, Bengaluru - 560098, INDIA, Karnataka , India Bangalore -----

**2)Shwetha K P**

Address of Applicant :#21A, 15th Cross, Balaji Layout, Mallathahalli, Bengaluru - 560056, , Karnataka, India Bangalore -----

**3)Sudha Kamath M K**

Address of Applicant :#13&14, Raju Layout, Behind Nehru Public School, Nagadevanahalli, Jnanabharathi Post, Bengaluru - 560056, Karnataka, India Bangalore -----

**4)Yash Athreya**

Address of Applicant :# 4094 , Sobha Forest View, Off Kanakapura Road, Vajarahalli Main Road, Bengaluru - 560062, Karnataka, India Bangalore -----

**5)Suraj L**

Address of Applicant :# EWS 687, 1st Cross, Navanagar, Hubli 580025, Karnataka, India Hubli -----

**6)Vinaykumar**

Address of Applicant :4-4-193/4C, Zaheerabad Area, Raichur 584101, Karnataka, India Raichur -----

**7)Mamtha V**

Address of Applicant :6/27, 10 'C' Main road, 14th Cross, 6th Block, Rajajinagar, Bengaluru-560010, Karnataka, India. Bangalore -----

(57) Abstract :

Title: A Preparation Method of Tungsten Oxide Nanocubes having High-Specific Capacitance for Electrochemical Energy Storage Applications  
ABSTRACT A preparation method 100 of tungsten oxide nanocubes comprising mixing 110 substantial amount of tungsten precursor, pH modifier and a capping agent using distilled water to make a solution, and transferring 120 the solution into a teflon lined autoclave, seal and heat the solution in a hot air oven, cool down 130 the autoclave, quenching 140 resultant product in ice-cold water, washing 150 the resultant product using water and acetone and drying the washed product in a hot air oven to obtain tungsten oxide nanocubes, wherein the tungsten oxide nanocubes based electrode includes good electrical charge storage capacity. The capping agent includes at least one of cetyltrimethylammonium bromide (CTAB), Didodecyldimethylammonium bromide (DDAB), Hexadecyltrimethylammonium (HDTMA) bromide, Hexadecylpyridinium bromide (HDPB), Ethylhexadecyldimethyl ammonium (EHDDMA), Octadecyltrimethylammonium bromide (ODTMA-Br), Stearyl trimethylammonium chloride (STAC). The tungsten precursor includes at least one of Tungstic acid (H<sub>2</sub>WO<sub>4</sub>), Potassium Tungstate (K<sub>2</sub>WO<sub>4</sub>), Barium Tungstate (BaWO<sub>4</sub>), Ammonium Meta Tungstate (NH<sub>4</sub>)<sub>6</sub>H<sub>2</sub>W<sub>12</sub>O<sub>40</sub>.xH<sub>2</sub>O). < FIG.1 >

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