

पेटेंट कार्यालय
शासकीय जर्नल

**OFFICIAL JOURNAL
OF
THE PATENT OFFICE**

निर्गमन सं. 27/2025
ISSUE NO. 27/2025

शुक्रवार
FRIDAY

दिनांक: 04/07/2025
DATE: 04/07/2025

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 01st 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

04th July, 2025

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341089261 A

(19) INDIA

(22) Date of filing of Application :28/12/2023

(43) Publication Date : 04/07/2025

(54) Title of the invention : A TWO-STEP SYNTHESIS METHOD FOR PREPARING NISE2@WO3 NANO-COMPOSITE

(51) International classification	:C25B11/095, B82Y30/00, C01B19/04, C25B1/04, C30B29/32, C01G23/00, C30B7/10	(71)Name of Applicant : 1)R. V. College of Engineering Address of Applicant :Mysore Road, R.V. Vidyaniketan Post, Bengaluru- 560059, Karnataka, India. Bengaluru- Karnataka India
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(86) International Application No	:NA	4)Yash Athreya
Filing Date	:NA	5)Suraj L
(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 :

The present invention disclose, a novel synthesis method of NiSe₂@WO₃ nano-composite nano-particles through a simple two-step one-pot hydrothermal synthesis. The method involves the preparation of tungsten oxide (WO₃) nano-particles in the first step and the growth of NiSe₂ nanospheres on WO₃ nano-particles in the second step. The synthesis method involves preparing tungsten oxide nano-particles using a one-step hydrothermal approach at 180o for 2 hours, followed by thorough washing and drying. Subsequently, the tungsten oxide (WO₃) nano-particles are dispersed in water and subjected to sonication for a period of 30 minutes. Simultaneously, Nickel diselenide (NiSe₂) nano-particles are synthesized using another one-step one-pot hydrothermal route under identical conditions (180o for 2 hours).The resulting composite NiSe₂@WO₃ nano-particles exhibits specific capacitance of 6045.8 F/g at a current density of 5 A/g, along with cyclic retention of 51.8% after 5000 cycles in a 0.5 M H₂SO₄ electrolyte.

No. of Pages : 20 No. of Claims : 7