

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202431094763 A

(19) INDIA

(22) Date of filing of Application :02/12/2024

(43) Publication Date : 06/12/2024

(54) Title of the invention : An adsorbent from cow dung for the removal of metal ions from waste water and further use as an electrode in supercapacitor, and a process for the preparation thereof

(51) International classification :B01J0020280000, B01J0020300000, C11D0003200000, H01G0011260000, H01M0004660000 (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)INDIAN INSTITUTE OF TECHNOLOGY (INDIAN SCHOOL OF MINES), DHANBAD Address of Applicant :Dhanbad - 826004, Jharkhand, India Dhanbad ----- ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. Sonalika Address of Applicant :Department of Environmental Science and Engineering, Indian Institute of Technology (Indian School of Mines), Dhanbad, Dhanbad - 826004, Jharkhand, India Dhanbad ----- 2)Dr. Sourav Acharya Address of Applicant :Department of Environmental Science and Engineering, Indian Institute of Technology (Indian School of Mines), Dhanbad, Dhanbad - 826004, Jharkhand, India Dhanbad ----- 3)Dr. Brijesh Kumar Mishra Address of Applicant :Department of Environmental Science and Engineering, Indian Institute of Technology (Indian School of Mines), Dhanbad, Dhanbad - 826004, Jharkhand, India Dhanbad ----- 4)Dr Ganesh Chandra Nayak Address of Applicant :Department of Chemistry and Chemical Biology, Indian Institute of Technology (Indian School of Mines), Dhanbad, Dhanbad - 826004, Jharkhand, India Dhanbad -----
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(57) Abstract :

This invention relates to an adsorbent from cow dung for the removal of metal ions from waste water, comprising porous carbon obtained from cow dung, activated with an activating agent and coated with polyaniline (PANI), the adsorbent containing carbon (C) at 60.94% by weight, oxygen (O) at 20.61% and nitrogen (N) at 12.77%, silicon (Si) at 2.79% and sulfur (S) at 2.56% by weight. Fig. 1

No. of Pages : 45 No. of Claims : 9