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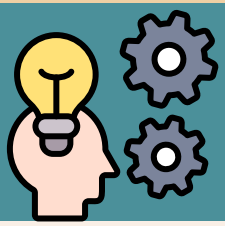
Technology Available for Licensing

TITLE OF THE TECHNOLOGY:- BACTERICIDAL METAL NANOPARTICLES AND THEIR METHOD OF PREPARATION

ABOUT THE INVENTORS

Prof. N. Siva Mohan Reddy and Utsav Dalal
Dept. of Chemical Engineering



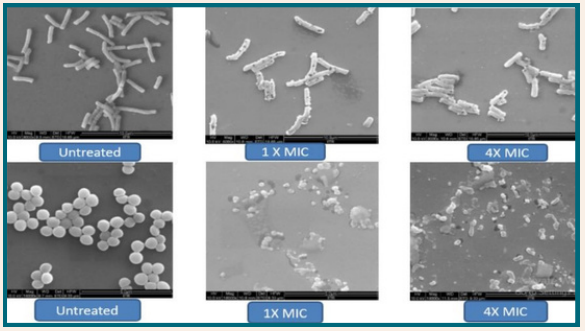
PATENT STATUS

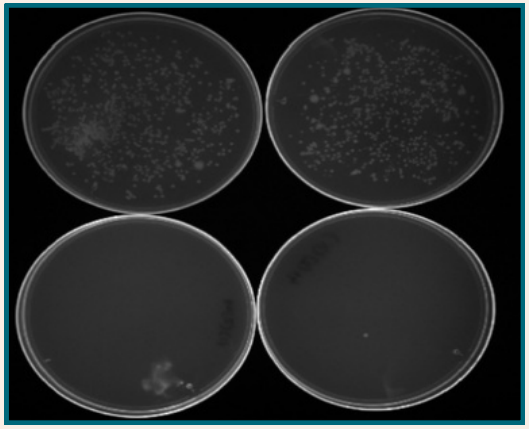
Granted
Patent No. 562080
Application No. 201811026558

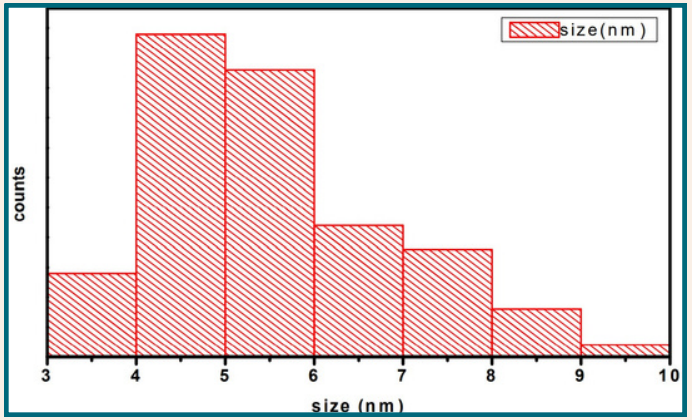
ABOUT THE TECHNOLOGY

The Invention is in the field of metal nanoparticles. Particularly, the Invention provides an efficient method for the production of a stable metal nanoparticle and a packaging material based on same, useful for the purification of water.

Keywords: Metal nanoparticles, production of a stable metal nanoparticle.







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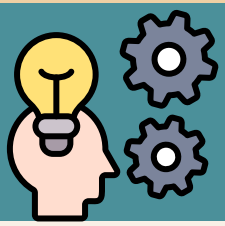
Technology Available for Licensing

TITLE OF THE TECHNOLOGY:- CHIKUNGUNYA VIRUS TITRATION AND DETECTION KIT

ABOUT THE INVENTORS

Prof. ShaillyTomar, Prof. Parvindra Kumar,
Neetu, Vedita Anand Singh, and Shweta Choudhary
Dept. of Biosciences and Biongineering



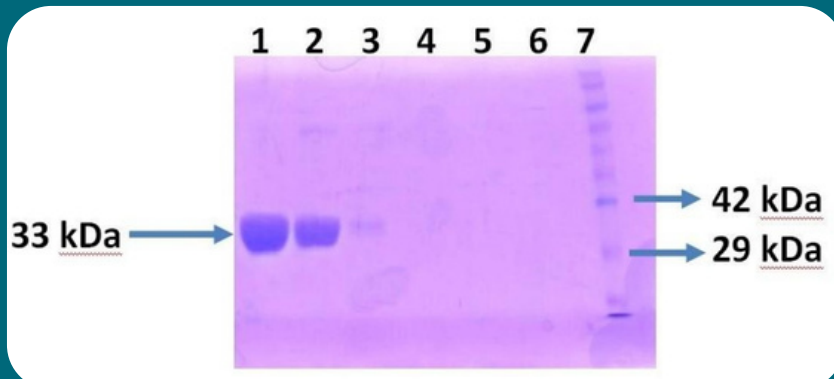
PATENT STATUS

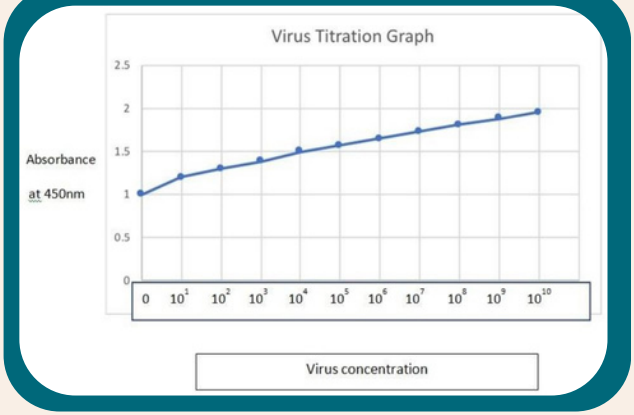
Granted
Patent No. 562959
Application No. 201911035044

ABOUT THE TECHNOLOGY

TThe present invention relates to rapid detection and titer determination of chikungunya virus/alphavirus. The Invention provides an efficient kit and method for the detection of chikungunya virus/alphavirus in a sample.

KEYWORDS: RAPID DETECTION AND TITER DETERMINATION, CHIKUNGUNYA VIRUS TITRATION, ALPHAVIRUS.





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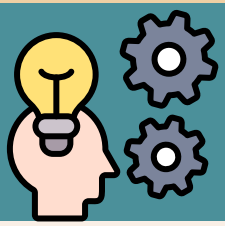
Technology Available for Licensing

TITLE OF THE TECHNOLOGY:- A PROCESS FOR REMOVING/ REDUCING ODOR AND VOC FROM RECYCLED POLYMER

ABOUT THE INVENTORS

Sampat Singh Bhati and Pragti Saini
Dept. of Paper Technology

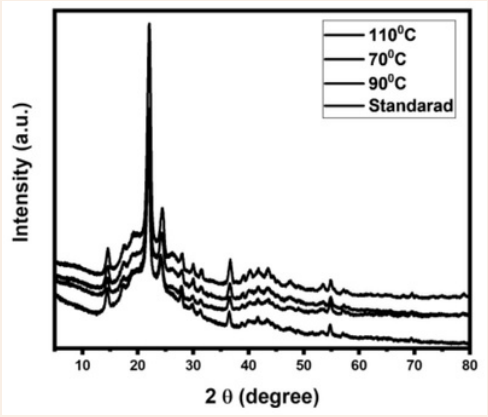


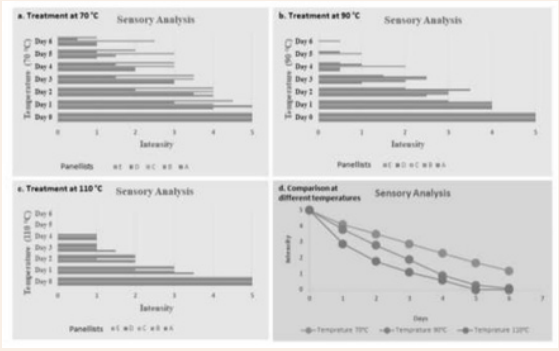
PATENT STATUS

Granted
Patent No. 563513
Application No. 202311047669

ABOUT THE TECHNOLOGY

The present invention relates to the remediation process of packaging materials. Specifically, the present invention relates to a process for reducing volatile organic compounds (VOCs) and odorous compounds from plastic packaging recyclates using heated air purging without compromising mechanical properties, rheological properties, and thermal properties..





KEYWORDS: REMEDIATION PROCESS OF PACKAGING MATERIALS, VOLATILE ORGANIC COMPOUNDS (VOCS), PLASTIC PACKAGING RECYCLATES.

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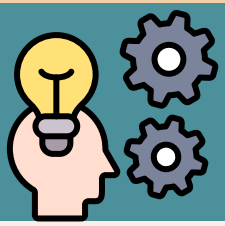
Technology Available for Licensing

TITLE OF THE TECHNOLOGY:- TRI-REFORMING OF METHANE TO SYNGAS OVER NICKEL ZIRCONIA CATALYST

ABOUT THE INVENTORS

Prof. Prakash Biswas, Prof. Prateek Kumar Jha,
Akansha Pandey and Arisha Sharma
Dept. of Chemical Engineering



PATENT STATUS

Granted
Patent No. 572987
Application No. 202311083937

ABOUT THE TECHNOLOGY

The present invention relates to a nickel zirconia catalyst and its method of preparation for the tri-reforming of methane for the production of syngas with an H_2/CO molar ratio of 1.5-2.0. The synthesis gas with an H_2/CO ratio of 1.5-2.0 is used as a feedstock in the Fischer-Tropsch (FT) synthesis process for the production of high-value products.

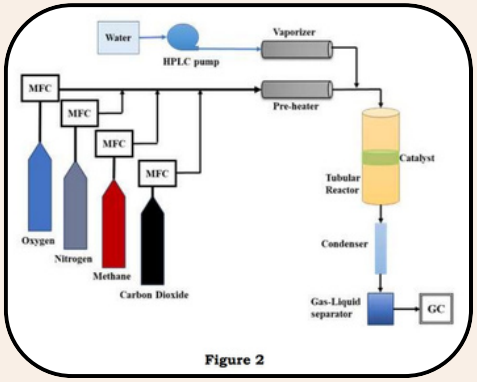


Figure 2

KEYWORDS: NICKEL ZIRCONIA CATALYST, TRI-REFORMING OF METHANE, PRODUCTION OF SYNGAS WITH AN H_2/CO, FISCHER-TROPSCH (FT) SYNTHESIS PROCESS.

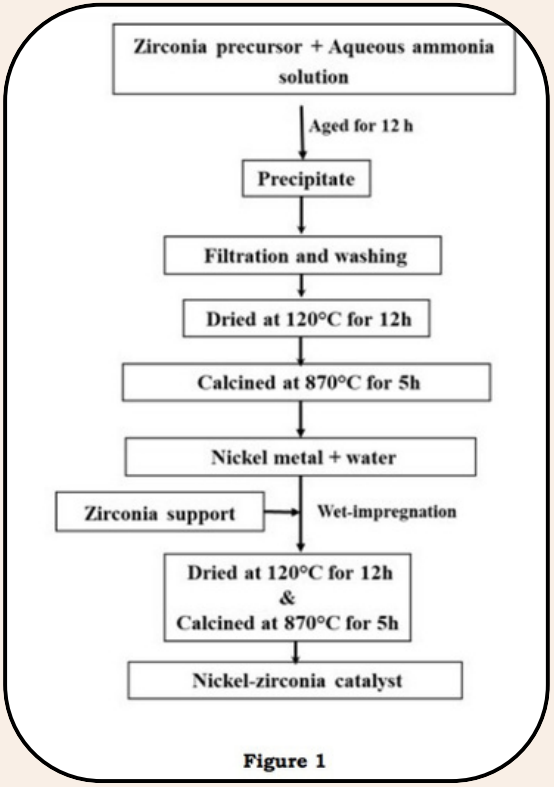


Figure 1

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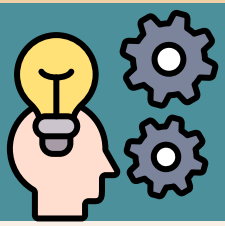
TITLE OF THE TECHNOLOGY:- AN EXPRESSION VECTOR COMPRISING SPONTANEOUS CLEAVAGE SITE AND USE THEREOF

ABOUT THE INVENTORS

Prof. Pravindra Kumar, Neetu,
Jai Krishna Mahto and Ishani Mishra
Dept. of Biosciences and Bioengineering

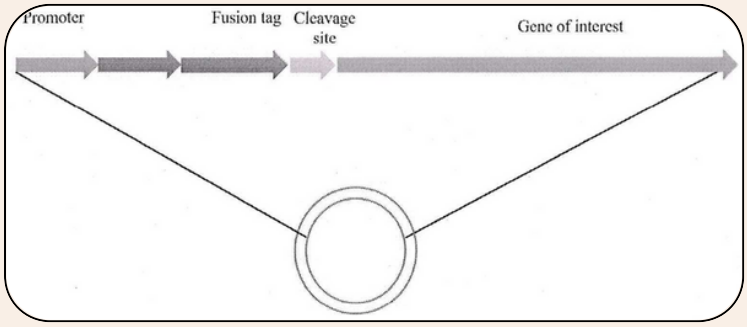


PATENT STATUS

Granted
Patent No. 570728
Application No. 202211051785

ABOUT THE TECHNOLOGY

The invention is an expression vector system that produces fusion proteins containing a built-in spontaneous cleavage site between the fusion tag and the protein of interest. Under suitable conditions, the fusion protein gets cleaved at this site, releasing the untagged recombinant protein without the need for external proteases.



TECHNOLOGY APPLICATIONS

This technology provides an expression vector platform for producing recombinant proteins that automatically remove their fusion tag via a spontaneous cleavage site. It enables streamlined production of untagged proteins for structural biology, enzyme studies, and assay development, reducing the reliance on external proteases, additional purification steps, and associated costs.

KEYWORDS: SPONTANEOUS CLEAVAGE, FUSION TAG, RECOMBINANT PROTEIN, RECOMBINANT FUSION PROTEIN.

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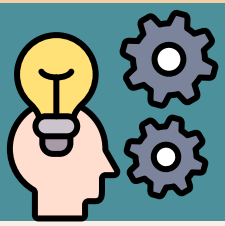
TITLE OF THE TECHNOLOGY:- AN ELECTROCOAGULATION BASED TREATMENT SYSTEM AND METHOD FOR ARSENIC AND FLUORIDE CONTAMINATED WATER

ABOUT THE INVENTORS

Prof. Prasenjit Mondal and Hemant Goyal
Dept. of Chemical Engineering

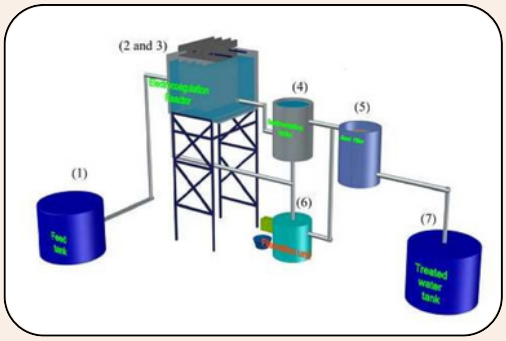


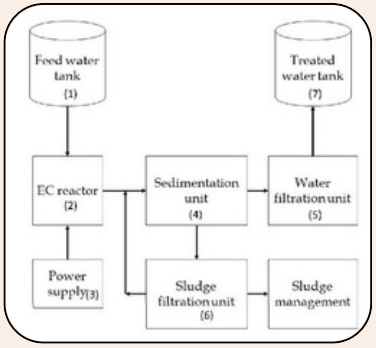
PATENT STATUS

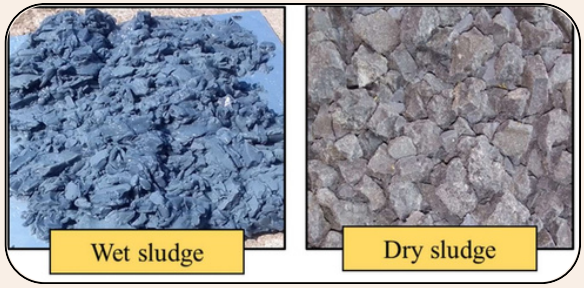
Granted
Patent No. 572289
Application No. 202311014986

ABOUT THE TECHNOLOGY

The present invention relates to the electrocoagulation (EC) based treatment system and method for arsenic and fluoride contaminated water for community purposes. The operating conditions are optimized which reduces the operating cost of treatment. Residual aluminum (Al) in treated water has also been evaluated, and the water filter unit has been optimized using different materials to get Al concentration below the permissible limit.







KEYWORDS: ELECTROCOAGULATION (EC) BASED TREATMENT SYSTEM, ARSENIC AND FLUORIDE CONTAMINATED WATER, RESIDUAL ALUMINUM (AL).

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TITLE OF THE TECHNOLOGY:- SCAFFOLD HAVING POROUS BEADS AND PREPARATION METHOD THEREOF AND ITS APPLICATION AS THREE DIMENSIONAL TUMOR MODEL

ABOUT THE INVENTORS

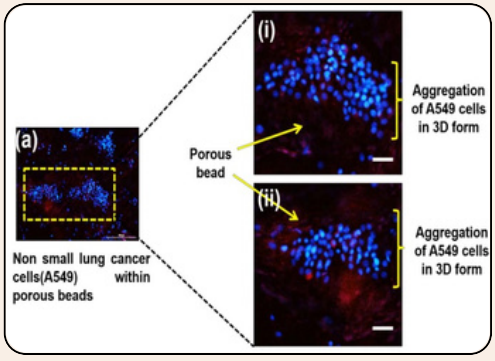
Prof. P. Gopinath and Vinay Kumar
Dept. of Biosciences and Bioengineering

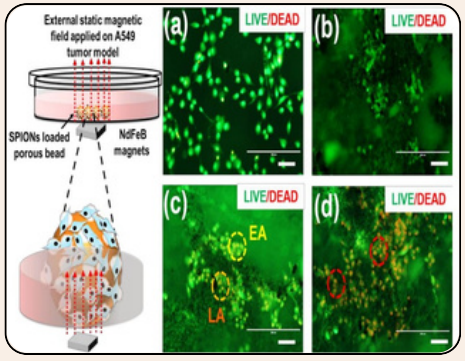
PATENT STATUS

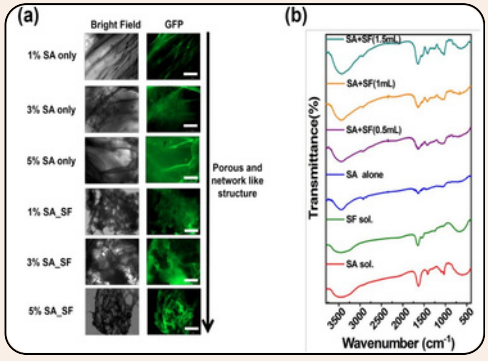
Granted
Patent No. 570024
Application No. 202311020553

ABOUT THE TECHNOLOGY

The present invention relates to a scaffold having porous beads and their method of preparation and its application as three dimensional tumor model. It relates to a process of preparation of sodium alginate/silk fibroin scaffold having porous beads. It also relates to a process of preparation of super paramagnetic iron oxide nanoparticles loaded sodium alginate/silk fibroin scaffold having porous beads. It further illustrates a three dimensional tumor model based on scaffold having porous beads of sodium alginate/silk fibroin. The three dimensional tumor model is utilized for screening of anti-cancer drugs. The three-dimensional tumor models based on scaffold having porous beads of sodium alginate/silk fibroin /super paramagnetic iron oxide nanoparticle is utilized for mechanobiology studies.







KEYWORDS: SCAFFOLD HAVING POROUS BEADS, THREE DIMENSIONAL TUMOR MODEL, SODIUM ALGINATE/SILK FIBROIN SCAFFOLD, SODIUM ALGINATE/SILK FIBROIN /SUPER PARAMAGNETIC IRON OXIDE.

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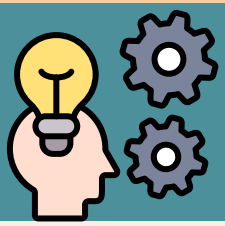
TITLE OF THE TECHNOLOGY:- COMPOSITION FOR ANTICOUNTERFEIT INK LIQUID COMPRISING CRYSTALLINE CELLULOSE NANOCRYSTAL AND METHOD OF PREPARATION THEREOF

ABOUT THE INVENTORS

Prof. Pradip K. Maji,
Shiva Singh and Shakshi Bhardwaj
Dept. of Polymer and Process Engineering

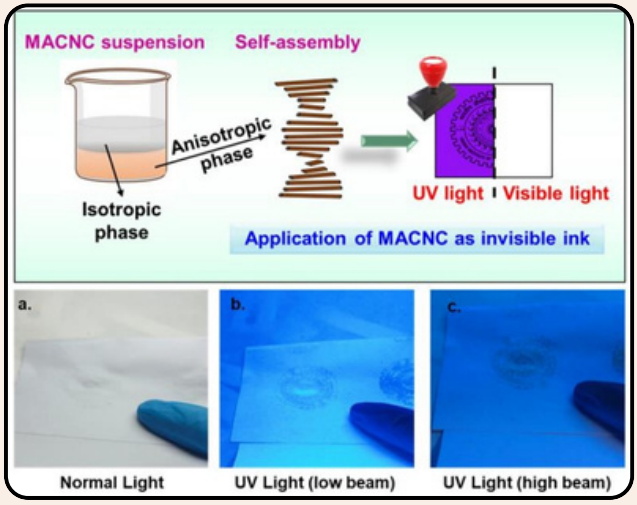


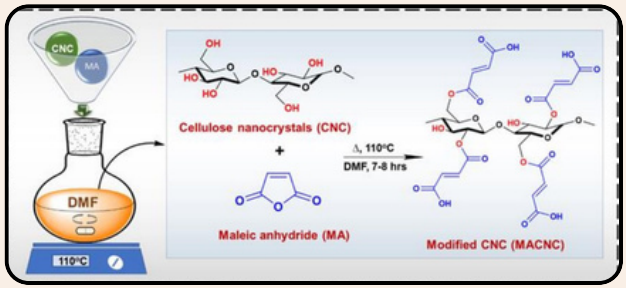
PATENT STATUS

Granted
Patent No. 573822
Application No. 202311049376

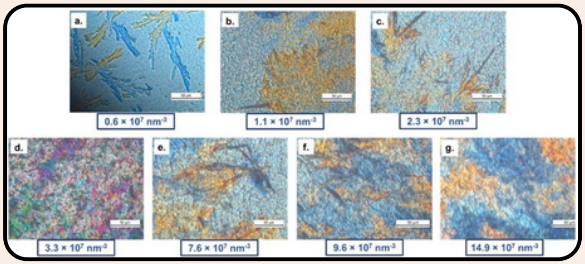
ABOUT THE TECHNOLOGY

The present invention generally relates to a composition comprising nanocrystals that are useful in a variety of fields, including biology, analytical and combinatorial chemistry, security ink, stimuli response, and anti-counterfeiting, and methods for their preparation and use. Cellulose, with the application of nanotechnology, has many potential uses, leading to a spike in research on separating nanocellulose from various agricultural byproducts. The present invention has extracted cellulose nanocrystals from various agricultural and food wastes and used them as a liquid-crystalline material (subtle ink) for anticounterfeiting.





KEYWORDS:
CELLULOSE NANOCRYSTALS, ANTICOUNTERFEITING INK, LIQUID CRYSTALLINE MATERIAL, BIOMASS VOLARISATION, ANALYTICAL AND COMBINATORIAL CHEMISTRY, NANOTECHNOLOGY.



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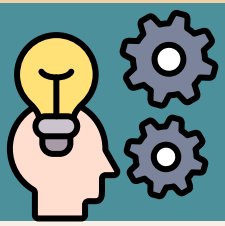
TITLE OF THE TECHNOLOGY:- A LOW-DENSITY STEEL WITH EXCELLENT STRENGTH-ELONGATION COMBINATION AND ITS METHOD OF PREPARATION THEREOF

ABOUT THE INVENTORS

Prof. Sadhan Ghosh, Prof. Sourav Das,
Pankaj Rawat and Sumit Bhan
Dept. of Metallurgical and Materials Engineering



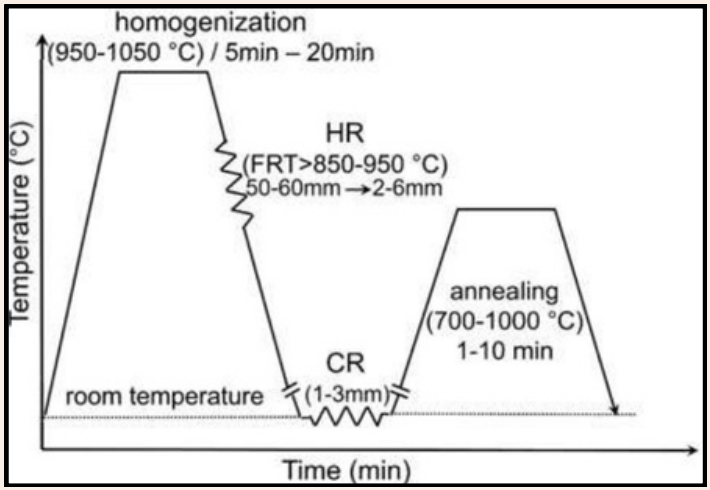
PATENT STATUS

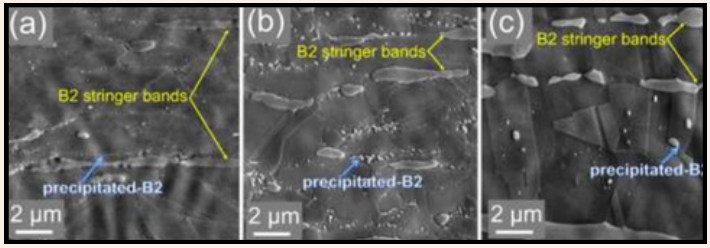
Granted
Patent No. 573570
Application No. 202311065276

ABOUT THE TECHNOLOGY

The present invention relates to a low-density steel with an excellent strength-elongation combination and its method of preparation. The steel was synthesized in a vacuum arc melting furnace having composition in wt%: C: 0.5-0.7, Mn: 12-16, Al: 6-11, Ni:1-3, remaining iron, and unavoidable impurities. The alloy ingot was homogenized at 950-1050°C for 5-20 min, followed by hot rolling to yield a sample thickness of 2-6 mm. The final sample thickness of 1- 3 mm was achieved by cold rolling. The cold-rolled sheet was annealed at 700-1000°C for 1-10 min to obtain the desired microstructure, with 70-90% austenite and 10-30% B2, to deliver the required mechanical properties.

KEYWORDS: LOW-DENSITY STEEL, XCELLENT STRENGTH-ELONGATION COMBINATION , VACUUM ARC MELTING FURNACE, COLD-ROLLED SHEET





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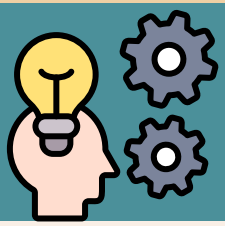
TITLE OF THE TECHNOLOGY: A HYBRID SYSTEM AND METHOD FOR THE TREATMENT OF ELECTROPLATING EFFLUENT

ABOUT THE INVENTORS

Prof. Himanshu Joshi and Jagdeesh Kumar
Dept. of Hydrology



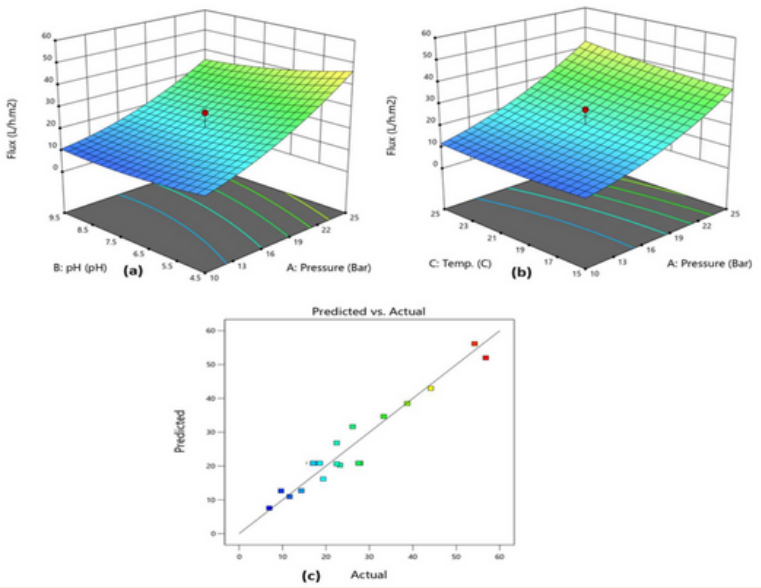
PATENT STATUS

Granted
Patent No. 572978
Application No. 202311070800

ABOUT THE TECHNOLOGY

The current invention pertains to a hybrid system and methodology designed for the treatment of electroplating effluent. This innovation comprises a tandem electrochemical and membrane-based process configuration expressly tailored for the treatment of electroplating (EP) effluent. A harmonious amalgamation of the electrocoagulation (EC) process with nanofiltration (NF) membranes has been meticulously engineered to elevate environmental sustainability and stimulate water recycling initiatives. Notably, this process stands out for its exceptional energy efficiency, demanding minimal energy inputs, and demonstrating compatibility with solar energy for seamless operation.

DRAWINGS



KEYWORDS: HYBRID SYSTEM AND METHODOLOGY DESIGNED, ELECTROPLATING EFFLUENT, MEMBRANE-BASED PROCESS CONFIGURATION EXPRESSLY TAILORED, HARMONIOUS AMALGAMATION OF THE ELECTROCOAGULATION (EC).

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