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Application Details	
APPLICATION NUMBER	202241061754
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	30/10/2022
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TITLE OF INVENTION	Use of Magnetic spinel ferrite nanoparticles (SFNPs) in green chemistry to produce complex oxides
FIELD OF INVENTION	METALLURGY
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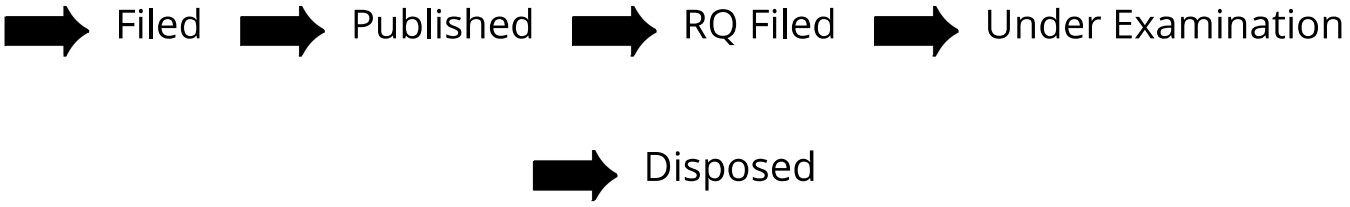
ADDITIONAL-EMAIL (As Per Record)	03mrmanoj@gmail.com
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	02/12/2022

Application Status	
APPLICATION STATUS	**Awaiting Request for Examination**

			View Documents



In case of any discrepancy in status, kindly contact ipo-helpdesk@nic.in

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :30/10/2022

(21) Application No.202241061754 A
(43) Publication Date : 02/12/2022

(54) Title of the invention : Use of Magnetic spinel ferrite nanoparticles (SFNPs) in green chemistry to produce complex oxides

(51) International classification	:C03B0032020000, C03C0003085000, C03C0004020000, H01F0001110000, B01J0035000000
(86) International Application No Filing Date	:PCT// :01/01/1900
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

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(57) Abstract :
The invention reveals magnetic spinel-structure ferrite nanoparticles and a preparation method thereof. This relates to the field of magnetic nanomaterials and aims to solve the problem that in the prior art, the defects of high production cost, low yield, environmental pollution, complicated operations, inadaptability to commercial production, and the like exist. The invention discloses magnetic spinel-structure ferrite nanoparticles and a preparation method thereof. The magnetic spinel-structure ferrite nanoparticles have the molecular formula of CoxCuyZnzFe3-x-y-zO4, wherein x ranges from 0 to 1, y ranges from 0 to 1, and z ranges from 0 to 1. Additionally, the magnetic spinel-structure ferrite nanoparticles have a diameter of 20nm to 400nm and can take the shape of a ball, a regular t. The preparation method includes the following steps: a soluble salt solution that has been plated with transition metal ions is mixed with an alkali metal-hydroxide solution in accordance with the volume ratio of 16:1-8 in order to carry out hydrothermal treatment, with the hydrothermal temperature ranging from 120 degrees Celsius to 180 degrees Celsius and the hydrothermal time ranging from 2 hours to 6 hours. The advantages of the preparation technique include cheap costs, easy procedures, strong applicability, adaptation to industrialized production, and similar benefits.

No. of Pages : 21 No. of Claims : 3