(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :29/02/2024

(21) Application No.202441015209 A
(43) Publication Date : 15/03/2024

(54) Title of the invention : MAKING OF BIOCOMPATIBLE COMPOSITES USING NOVEL MAGNETRON SPUTTERING METHOD

(51) International classification	:C23C0014350000, A61L0027040000, C23C0014560000, A61K0047340000, H01J0037340000
(86) International Application No Filing Date	:NA :NA
(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

(71)**Name of Applicant :**
1)Dr. Ranganatha Swamy MK
Address of Applicant :Associate Professor, Department of Mechanical Engineering, Faculty of Engineering and Technology, JAIN Deemed to be University, Bangalore, Karnataka, 562112 ---------- ----------
2)Mrs. K. Vijaya Lakshmi
3)Mr. B.Sarath Chandra
4)Mr.M.J.C.V Bala Ganapathi
5)Mr.J.Dinesh Kumar
6)Mr.M.Subramanian
7)B. Vijaya Ramnath
Name of Applicant : NA
Address of Applicant : NA
(72)**Name of Inventor :**
1)Dr. Ranganatha Swamy MK
Address of Applicant :Associate Professor, Department of Mechanical Engineering, Faculty of Engineering and Technology, JAIN Deemed to be University, Bangalore, Karnataka, 562112 ---------- ----------
2)Mrs. K. Vijaya Lakshmi
Address of Applicant :Assistant Professor (C), Department of Mechanical Engineering, JNTU College of Engineering, JNTUK, Kakinada-533003, East Godavari (Dist.) ---------- ----------
3)Mr. B.Sarath Chandra
Address of Applicant :Assistant Professor (C), Department of Mechanical Engineering, JNTU College of Engineering, JNTUK, Kakinada-533003, East Godavari (Dist.) ---------- ----------
4)Mr.M.J.C.V Bala Ganapathi
Address of Applicant :Assistant Professor (C), Department of Mechanical Engineering, JNTU College of Engineering, JNTUK, Kakinada-533003, East Godavari (Dist.) ---------- ----------
5)Mr.J.Dinesh Kumar
Address of Applicant :Assistant Professor, Department of Mechanical Engineering, Dr.Mahalingam College of Engineering And Technology, Pollachi -642003, Coimbatore District, Tamil Nadu, India ---------- ----------
6)Mr.M.Subramanian
Address of Applicant :Assistant Professor, Department of Mechanical Engineering, St.Joseph's College of Engineering, Old Mamallapuram Road, Chennai-600119, Tamilnadu, India ---------- ----------
7)B. Vijaya Ramnath
Address of Applicant :Professor, Department of Mechanical Engineering, Sri Sai Ram Engineering College, Sai Leo Nagar, West Tambaram, Chennai - 600044 ---------- ----------

(57) Abstract :
The proposed invention introduces a novel approach for fabricating biocompatible composites using Magnetron Sputtering, offering precise control over material properties and composition. By bombarding a target material with high-energy ions in a vacuum chamber, thin films are deposited onto substrates, enabling the creation of complex composite structures with tailored characteristics. This innovative method addresses limitations in traditional composite fabrication techniques, providing enhanced biocompatibility, mechanical strength, and corrosion resistance. The versatility of Magnetron Sputtering extends to various biomedical applications, including orthopedic implants, cardiovascular devices, tissue engineering scaffolds, and biosensors. Through interdisciplinary collaboration, this invention has the potential to revolutionize medical device design and tissue regeneration, ultimately improving patient outcomes. Accompanied Drawing [FIGS. 1-2]

No. of Pages : 21 No. of Claims : 10