

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202511097258 A

(19) INDIA

(22) Date of filing of Application :09/10/2025

(43) Publication Date : 14/11/2025

(54) Title of the invention : SMART FABRIC-INTEGRATED WELLNESS DEVICE FOR HEALTH MONITORING

(51) International classification	:A61B0005000000, A61B0005020500, D06M0016000000, A61B0005024000, A61B0005010000	(71)Name of Applicant : 1)K. R. Mangalam University Address of Applicant :School of Legal Studies, Sohna Road, Gurugram, Haryana -122103, India Sohna Haryana India
(31) Priority Document No	:NA	(72)Name of Inventor :
(32) Priority Date	:NA	1)Dr. Inderpreet Kaur
(33) Name of priority country	:NA	2)Dr. Priyamvada Tiwari
(86) International Application No	:	3)Dr. Sarita Rana
Filing Date	:01/01/1900	4)Dr. Surbhi Girdhar
(87) International Publication No	: NA	5)Dr. Aarti Lamba
(61) Patent of Addition to Application Number	:NA	6)Satish Rai
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

A textile-integrated wellness device includes a fabric substrate, flexible washable nanosensors configured to detect at least heart rate and body temperature, conductive interconnects, a rechargeable low-profile power module, and a bendable wireless transmission unit that streams data to a companion application for real-time visualization and alerts. Encapsulation and bonding stacks render the sensors wash-durable, maintaining accuracy after multiple laundering cycles. Methods are provided for continuous monitoring, artifact suppression, calibration, and alerting; optional modules compute moisture- or sweat-related indices and support cloud based analytics.

No. of Pages : 21 No. of Claims : 7