In-Situ Regenerable, Environmentally Stable, Multimodal Molecular Sensing Wearable Bioelectronics

Tech ID: 34592 / UC Case 2026-673-0

BRIEF DESCRIPTION

An advanced wearable bio-electronic device for non-invasive abnormality prediction, early diagnostics, and disease prevention.

FULL DESCRIPTION

This innovative technology features in-situ re-generable and environmentally stable wearable bio-electronics capable of multimodal molecular sensing, facilitating long-term health monitoring outside clinical environments. It is expected to address current limitations in wearable health sensors by enhancing stability, efficiency, and continuous functionality over extended periods. The battery-free wearable continuously and non-invasively collects health information on stress, inflammation, diabetes, and chronic kidney disease.

SUGGESTED USES

- Personal health monitoring (stress, inflammation, diabetes, and chronic kidney disease) and preventive care devices
- Chronic disease management through continuous biochemical sensing
- Fitness and wellness wearable technology markets

ADVANTAGES

- Features in-situ re-generability for an extended lifespan and environmental stability for reliable use in diverse conditions.
- Provides multimodal health data through a non-invasive, wearable format designed for everyday use.
- Offers the potential for hardware-based integration without requiring dependency on integral software components.

PATENT STATUS

Patent Pending

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OTHER INFORMATION

CATEGORIZED AS

- **Biotechnology**
  - Health
- **Medical**
  - Diagnostics
  - Disease: Kidneys and Genito-Urinary System
  - Disease: Metabolic/Endocrinology
- **Sensors & Instrumentation**
  - Analytical
  - Biosensors
  - Medical

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