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DEPARTMENT OF
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PENDING

(IN202311058897) RGO-PDMS dry electrodes for long-term health monitoring

NEED

Monitoring biopotential signals such as ECG, EMG, EOG, and EGG requires frequent use of single-use electrodes, which increases costs and waste. A sustainable alternative is needed for long-term health monitoring systems.

MARKET ANALYSIS

The global wearable medical devices market is projected to grow at a CAGR of 25.4%, reaching $295.5B by 2033 (source: MarketsandMarkets). Increasing demand for long-term health monitoring and sustainable solutions is a key driver.

TECHNOLOGY OVERVIEW

This technology presents a cost-effective, long-lasting solution for biopotential signal measurement by using rGO-PDMS dry electrodes. The process includes the fabrication of reduced graphene oxide (rGO) and its application onto a PDMS substrate, offering durability for long-term health monitoring.

Target Industries

1) Wearable medical device manufacturers, 2) Medical technology platforms focusing on biopotential monitoring, 3) Healthcare providers looking for cost-effective and durable monitoring solutions.

TECHNOLOGY KEY FEATURES

The rGO-PDMS electrode is reusable, cost-efficient, and environmentally friendly, offering enhanced performance for long-term health monitoring applications compared to traditional single-use electrodes.

AT A GLANCE

- SDG 3 (Good Health and Well-being), SDG 12 (Responsible Consumption and Production), SDG 9 (Industry, Innovation, and Infrastructure)

Read more here

Technology is available for licensing/ co-development.

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