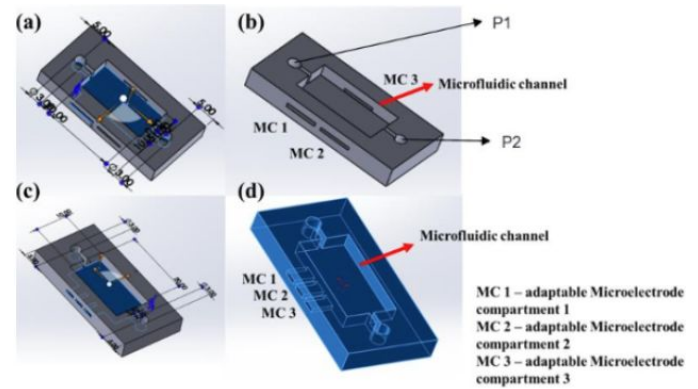


PENDING

(IN202411007574)

Miniaturised electrochemical microfluidic device (MEMD) and platforms



NEED

Traditional electrochemical microfluidic devices often lack adaptability in electrode configurations, making them unsuitable for diverse applications. But what if a microfluidic device could adapt its electrodes to any analyte without added complexity?

TECHNOLOGY OVERVIEW

This MEMD uses SLA printing for creating interchangeable, multi-substrate microelectrode compartments. It allows precise customization of electrodes and enables efficient fluid analysis with minimal labor, offering flexibility for various applications in fluid testing and sensing.

TECHNOLOGY KEY FEATURES

3D-printed, customizable electrodes, multi-substrate compatibility, compact design (2cm length, 0.3cm depth), adaptable for different analytes, low analyte volume (<1 ml), precise electrode compartment separation (0.1–0.15 cm).

[Read more here](#)

MARKET ANALYSIS

The global microfluidics market is projected to grow at a CAGR of 18.6% from 2023 to 2033, driven by demand for miniaturized, customizable sensors in diagnostics, pharmaceuticals, and environmental testing. [Source: Grand View Research, 2023]

Target Industries

Diagnostics, Environmental Monitoring, Pharmaceutical Research, Medical device manufacturers, diagnostics firms, environmental testing service providers, and R&D firms specializing in fluid analysis and custom sensors.

AT A GLANCE

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

Technology is available for licensing/ co-development.

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