



**Showcasing research work from Interfaces of BioNanoSystems research group at the Institute of Materials in Electrical Engineering 1, Faculty of Electrical Engineering and Information Technology, RWTH Aachen University, Germany.**

Programming layer-by-layer liquid phase epitaxy in microfluidics for realizing two-dimensional metal-organic framework sensor arrays

Advanced analytical platforms are necessary to meet the EQS regulations for environmental protection. This work focuses on integrating layer-by-layer liquid-phase epitaxy (LbL-LPE) in automated microfluidics for rapid growth of a two-dimensional metal-organic framework (MOF) for sensor-array fabrication with minimal precursors use. Automating LbL-LPE allows programmable integration of 2D MOFs devices, advancing material and device discovery as demonstrated here by realization of sensor arrays detecting diisobutyl phthalate, a serious environmental pollutant.

Image reproduced by permission of Vivek Pachauri from *Environ. Sci.: Nano*, 2025, **12**, 1849.

**As featured in:**



See Vivek Pachauri *et al.*, *Environ. Sci.: Nano*, 2025, **12**, 1849.