Supplementary Information (SI) for Lab on a Chip.

Integration of 3D Printed Mg^{2+} Potentiometric Sensors into Microfluidic Devices for Bioanalysis

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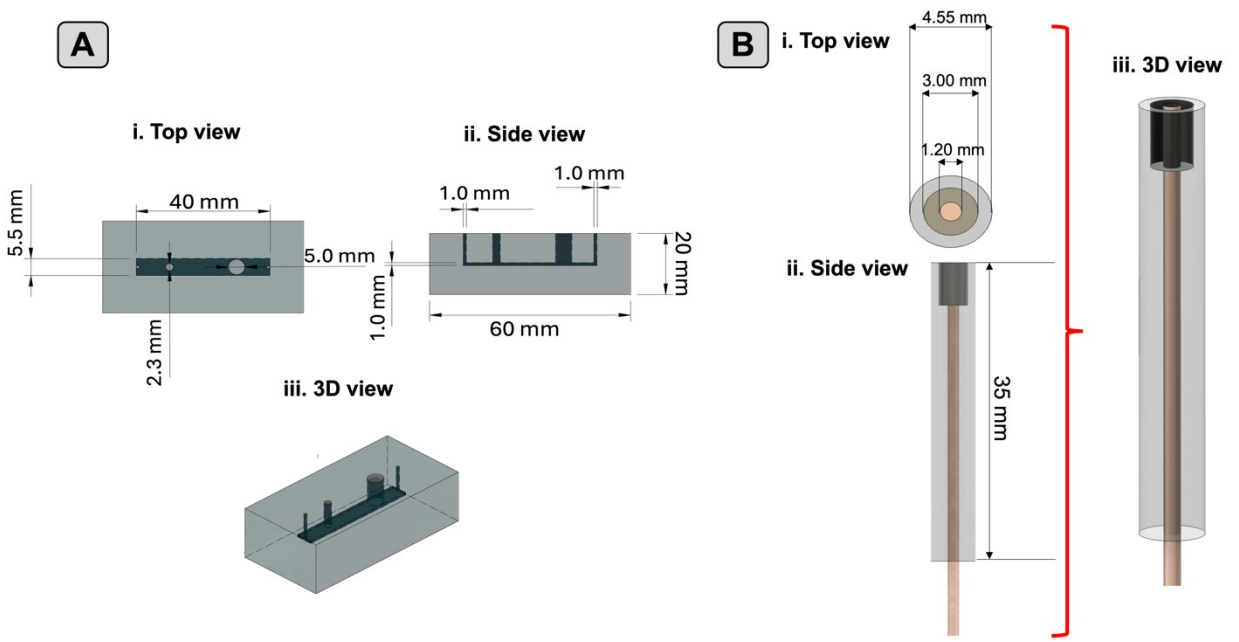

Figure SI.1. A. Schematic representation of the 3D printed microfluidic device with associated dimensions. dimensions of the 3D-printed components. Ai. 3D-printed microfluidic: top view. Aii. 3D-printed microfluidic: side view. Aiii. 3D-printed microfluidic: 3D view. B. Schematic representation of Bi. 3D-printed electrode housing: top view. Bii. 3D-printed electrode housing: side view. Biii. 3D-printed electrode housing: 3D view.

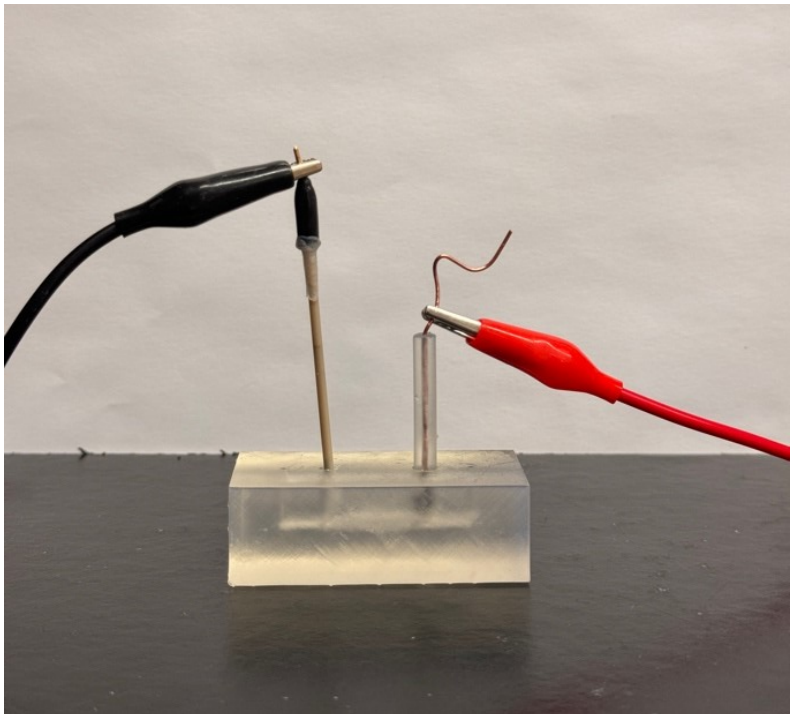

Figure SI.2. Potentiometric experimental setup of 3Dp-Mg^{2+}-ISE integrated into the 3D-printed microfluidic device

Table SI.1. Optimization of Mg^{2+} ISM composition.

DOS (%)	Slope (mV/Decade)	Linearity (R^2)	Linear range (mM)	Conditioning concentration
12	31.3	0.989	10- 0.15	100 µM
4	30.7	0.984	10- 0.078	100 µM
8 (Current Work)	27.2	0.999	10- 0.039	100 µM
	26.7	0.999	10- 0.625	1 mM

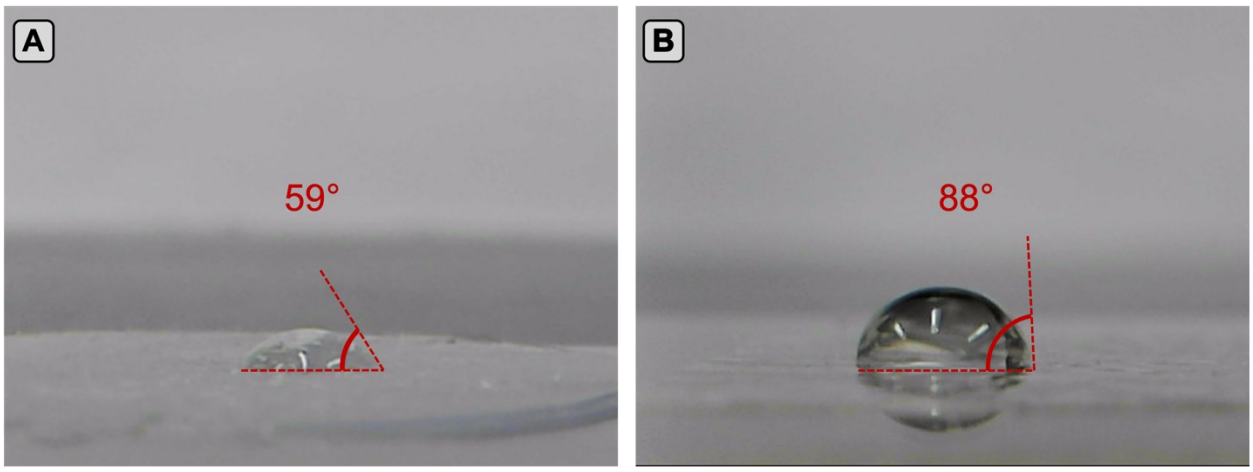

Figure SI.3. Water Contact Angle measurements for 3Dp-Mg^{2+}-ISM (A) vs. PVC-Mg^{2+}-ISM (B).