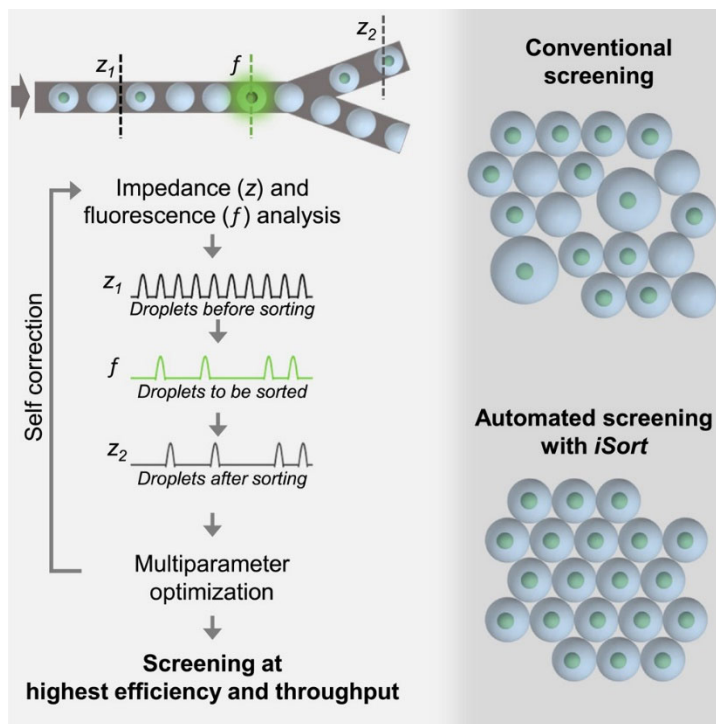


# iSort: Automated droplet manipulation in microfluidic systems



Ref. Nr	6.2250
Keywords	Microfluidic droplet sorting, Fluorescence-activated droplet sorting, automated cell sorting, diagnostic
Intellectual Property	WO2023094702A1
Publications	Panwar et al., 2023, Cell Reports Methods 3, 100478
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Summary of the iSort System (reproduced from Panwar et al., 2023, Cell Reports Methods)

## Description

Microfluidic droplet sorting is a powerful tool for high-throughput screening and single-cell analysis. The current solutions are however not transferable to non-specialised laboratories due to their inherent complexity to determine optimal sorting parameters and the shortcomings in terms of sorting quality.

The technology is an automated microfluidic droplet system that monitors each individual droplets using impedance analysis coupled with real time and continuous feedback controls of the sorting parameters.

## Advantages

The technology allows to easily and finely control the frequency, spacing, and trajectory of the droplets. The automated system results in higher throughput, higher reproducibility, increased robustness, and scalable system that is usable by non-specialist.

## Applications

- High-Throughput Screening for drug discovery, directed evolution, microbiome screening, biochemical assays
- Single-Cell phenotypic and genomic Analysis,
- Point of care diagnostics