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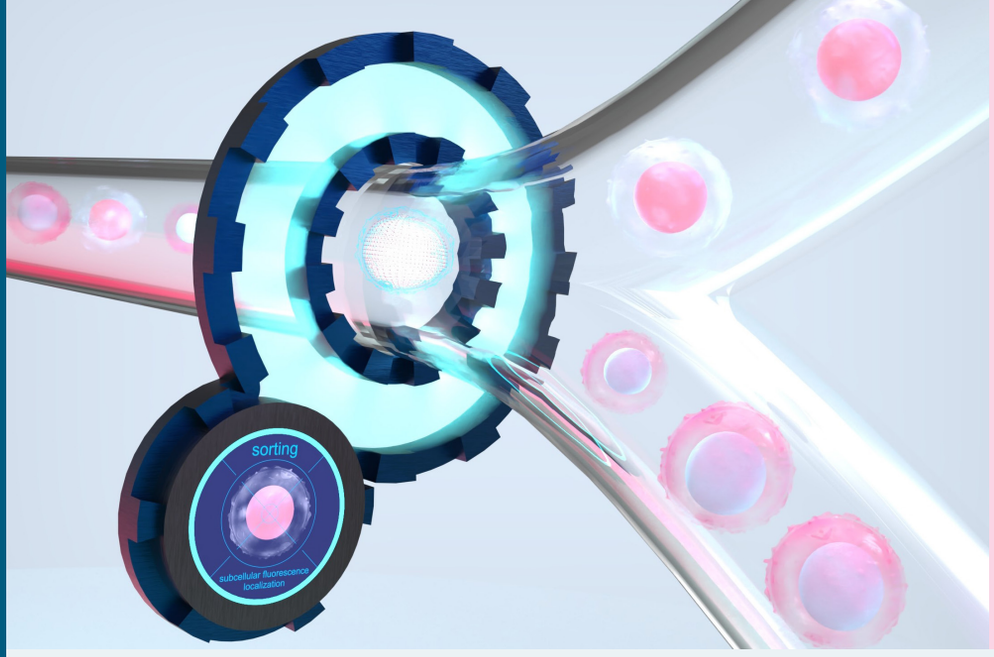
High-Precision Cell Handling and Image-Activated Cell Sorting



We elevate cell sample processing to a new level by integrating microfluidics, microscopy, and artificial intelligence. Our technology enables gentle, precise, and lossless handling. Featuring image-activated sorting, it surpasses traditional methods, enhancing quality significantly.

As key feature, we use microscopic imaging to isolate target cells precisely – a technique that exceeds standard FACS sorting capabilities. The system efficiently identifies both label-free attributes, like size and shape, as well as complex fluorescence-based features, such as subcellular localization and protein co-localization. Our technology marks a significant advancement in cell sample processing.

TRL-Level: 4-5

Patent Number: EP4188607

Standout quality

- **AI-supported** technology
- **Minimal loss** at low cell counts
- **No Centrifugation**
- **Aerosol-free** deposition of sorted cells
- **Gentle** cell handling
- **Wide spectrum** of cells

Industries

- Biotech
- Medtech
- Therapeutics
- Healthcare

Applications

Analytics and cell sorting

- Cell-cell interaction
- Intracellular trafficking
- Bio process monitoring
- Label-free cell sorting
- Imaging cytometry
- Microplastic particles

Medicine and therapeutics

- Functional screens in drug development
- ATMP Advanced therapy medicinal products
- Small biopsy analysis
- Forensic application

Research and development

- Cell line development
- Single-cell research
- Stem cell research
- Organoid research

Further information

https://www.cellsorting.fraunhofer.de
Gerling et al. 2023 Lab Chip,23, 3172-3185
Godino et al. 2019 Lab Chip, 19, 4016–4020

www.izi-bb.fraunhofer.de

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