

On-chip cell sorting by high-speed local-flow control using dual membrane pumps



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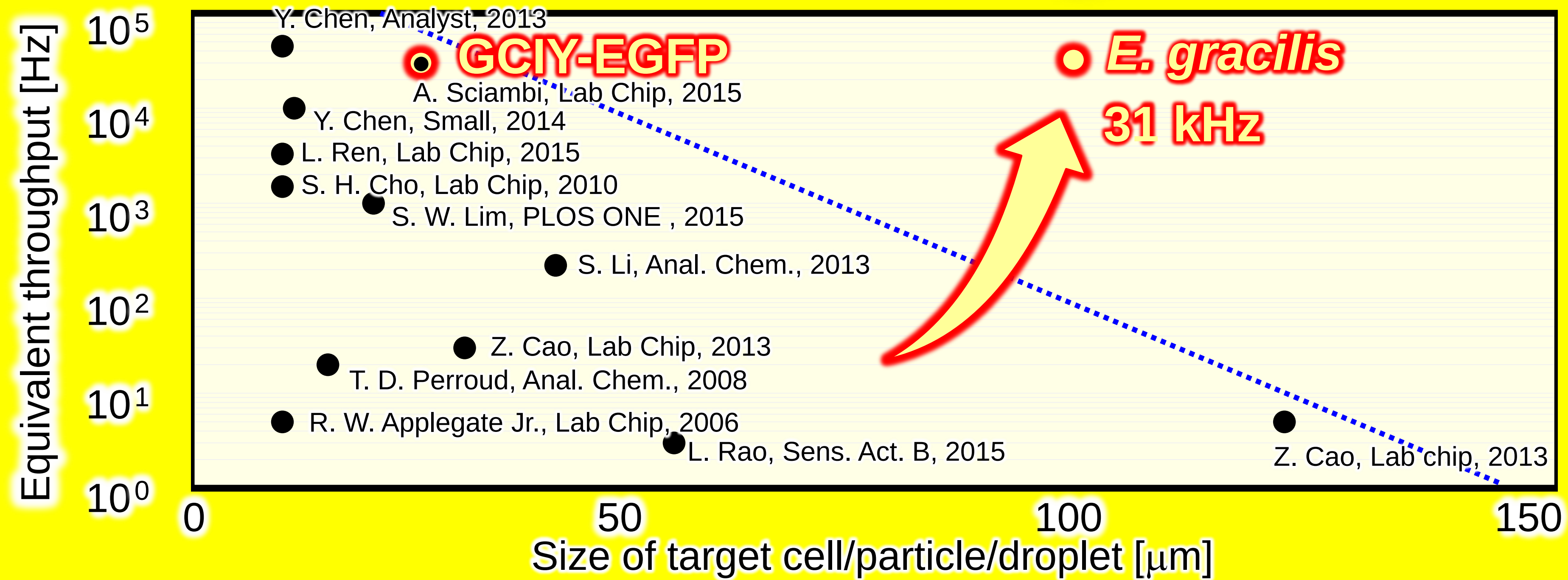
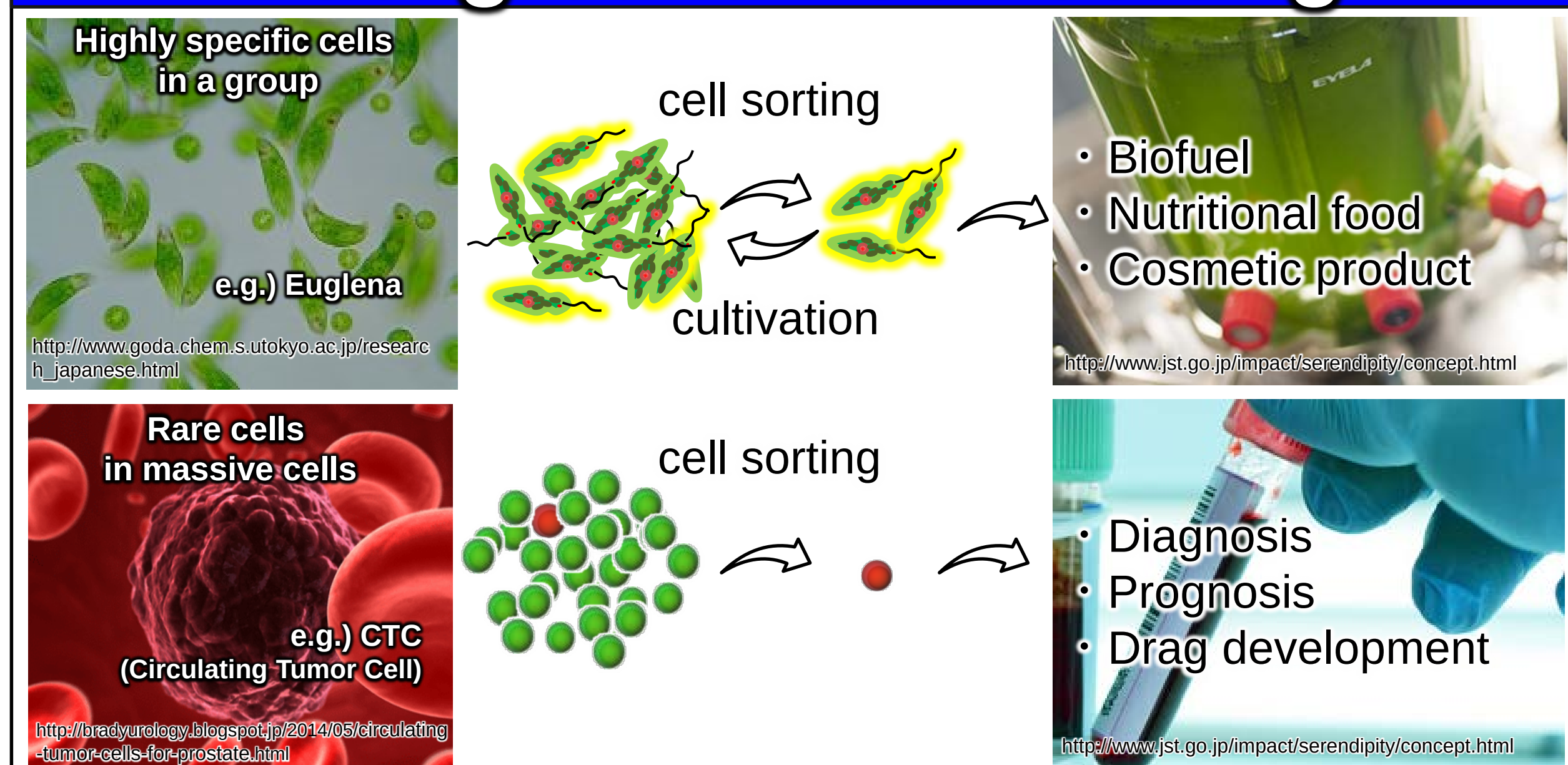


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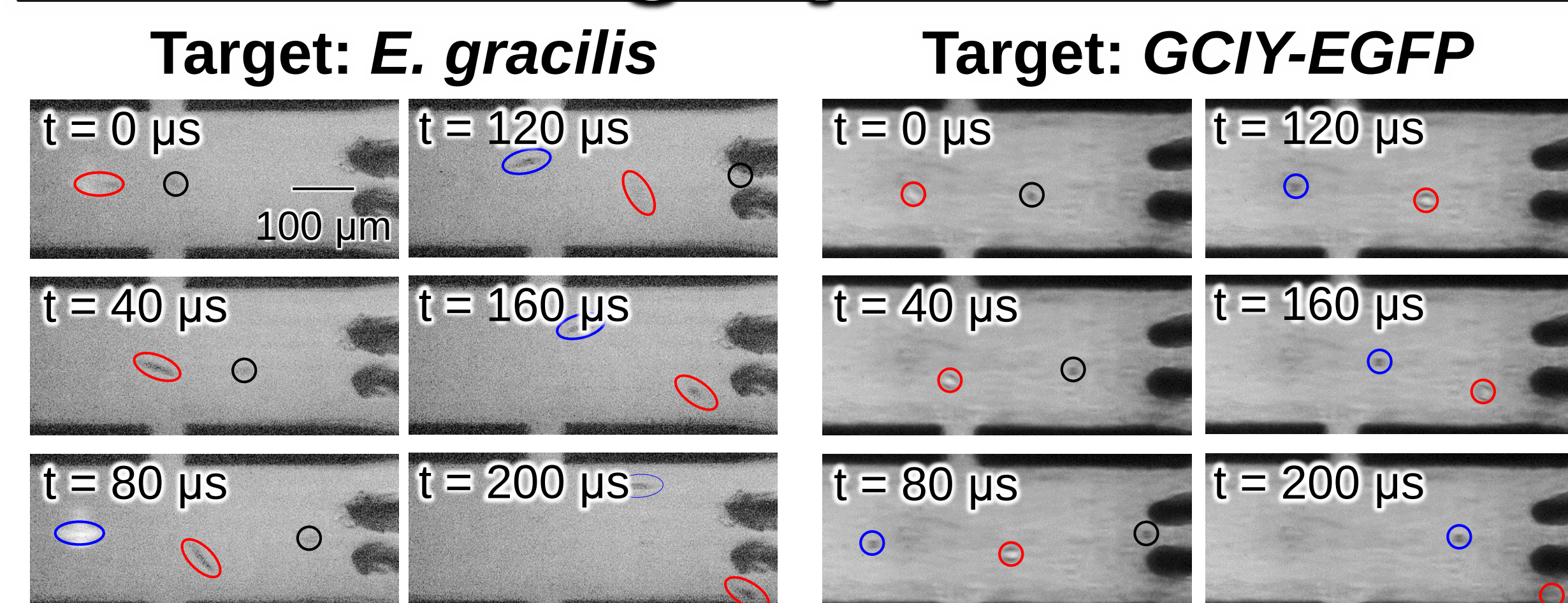
World fastest sorting of 100 μm large cells!

Background : Cell sorting

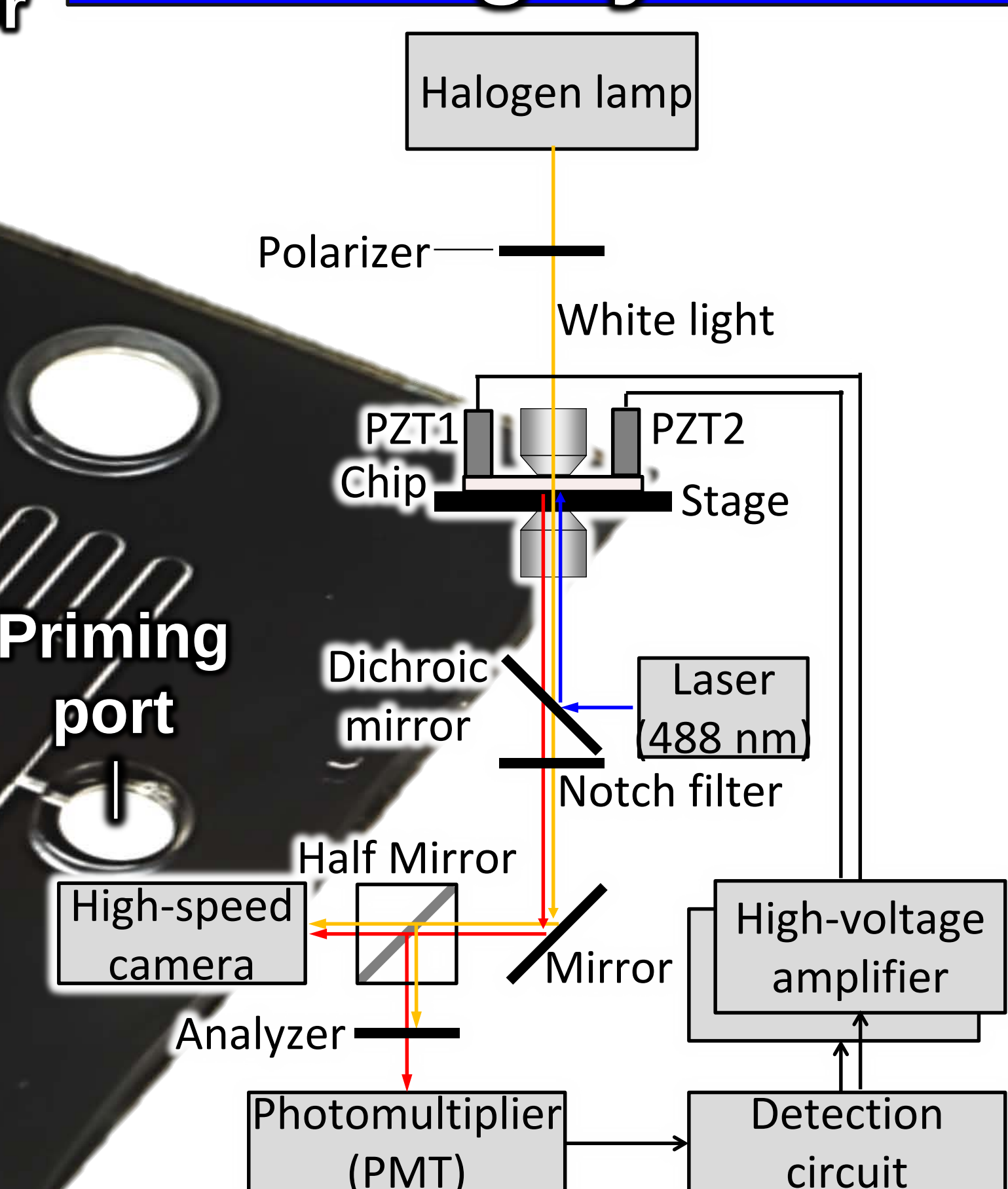


On - chip dual membrane pumps with high - rigidity chip

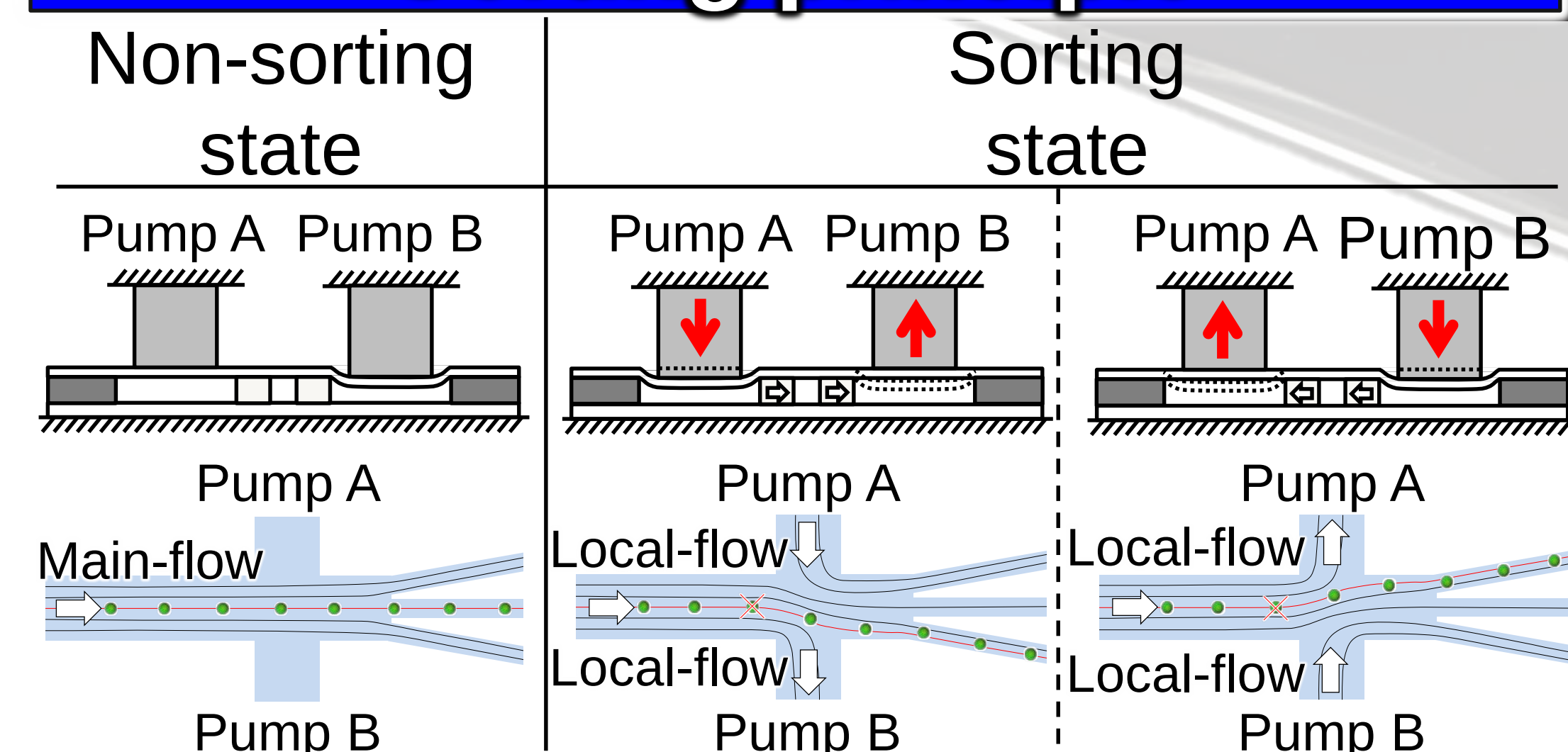
Sorting experiments



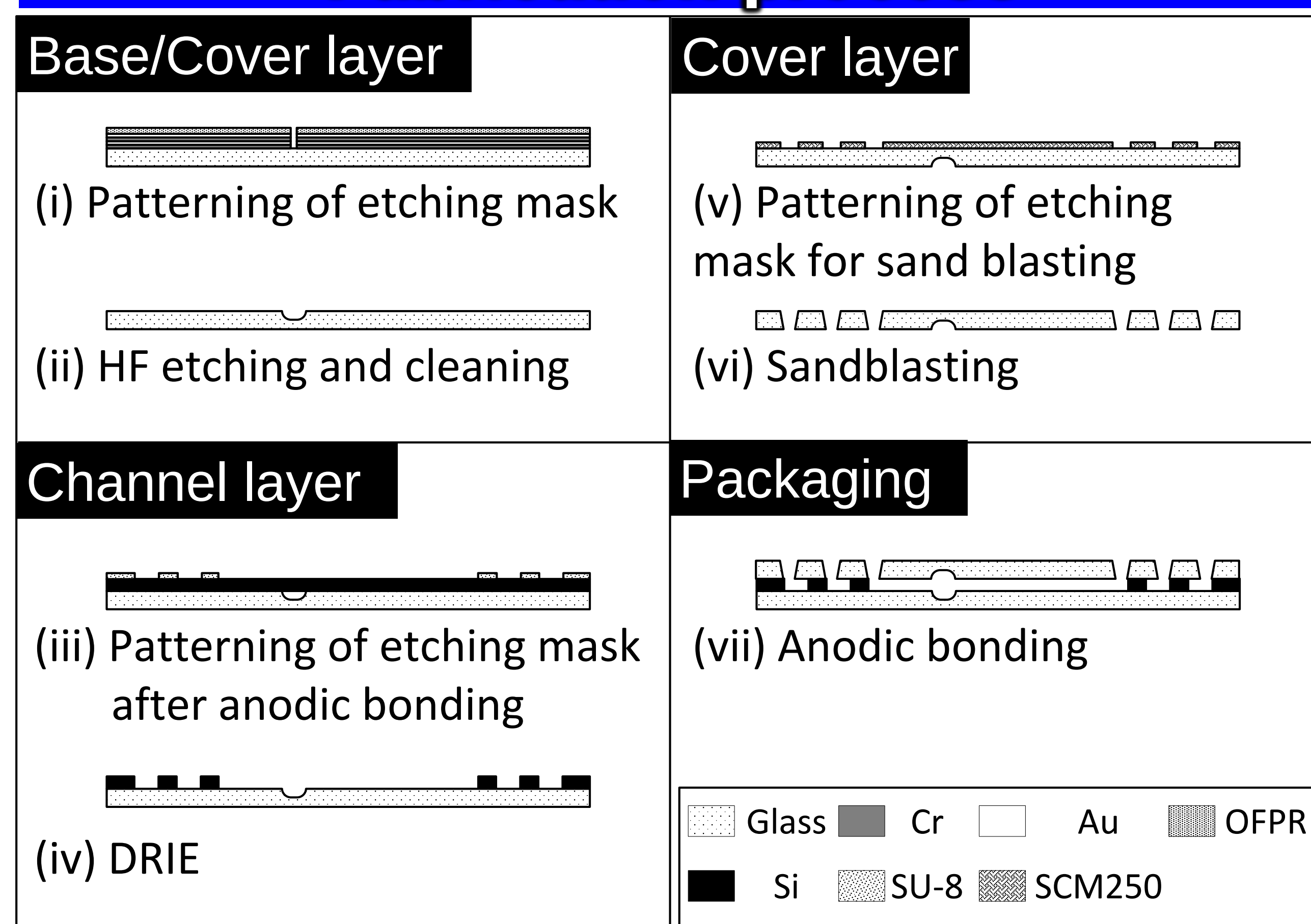
Sorting system



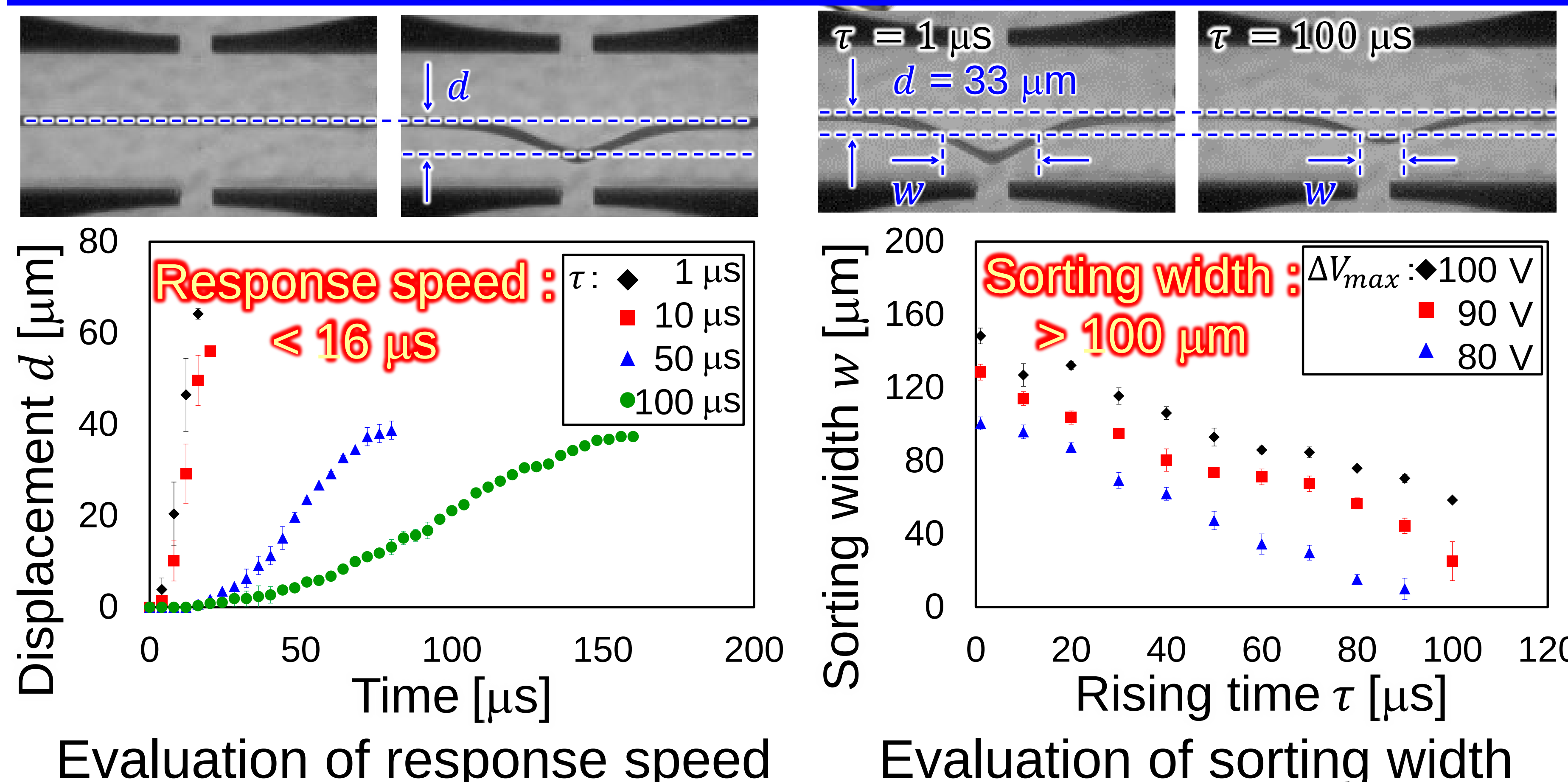
Sorting principle



Fabrication process



Evaluation of flow control



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References :
[1] S. Sakuma et al., On-chip cell sorting by high-speed local-flow control using dual membrane pumps, Lab on a Chip, 2017, DOI:10.1039/c7lc00536a
[2] Nitta et al., Intelligent Image-Activated Cell Sorting, Cell (2018), <https://doi.org/10.1016/j.cell.2018.08.028>



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