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Microfluidic Chemical Concentration Switching at Taylor's Limit[1] EBERHARD BODENSCHATZ, ALBERT BAE, LASSP, Cornell University, Ithaca and MPI for Dynamics and Selforganization, Goettingen, CARSTEN BETA, Institute for Physics and Astronomy, University of Potsdam and MPI for Dynamics and Selforganization, Goettingen — In this talk, we will discuss the time for switching chemical concentrations in microfluidic devices. The limits of rapid switching are analyzed based on the theory of dispersion by Taylor and Aris and compared to both experiments and numerical simulations. We conclude by comparing the performance of various switching techniques.

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