



Showcasing research from Professor Tegenfeldt's laboratory, Department of Physics and NanoLund, University of Lund, Sweden.

Short and long-range cyclic patterns in flows of DNA solutions in microfluidic obstacle arrays

Pumping high concentrations of DNA through microfluidic pillar arrays leads to a diverse set of patterns on various scales due to viscoelastic effects. The graphics feature kymographs demonstrating the behaviour of the DNA solution on the scale of the individual pillars. At low flow rates, stable depleted regions form around the pillars. At intermediate flow rates, the concentration of the DNA fluctuates in a regular manner. Finally, at the highest flow rates, seemingly chaotic behaviour is observed, coinciding with the regular macroscopic waves observed on the scale of the whole device.

As featured in:



See Jonas O. Tegenfeldt *et al.*,
Lab Chip, 2023, **23**, 1779.