

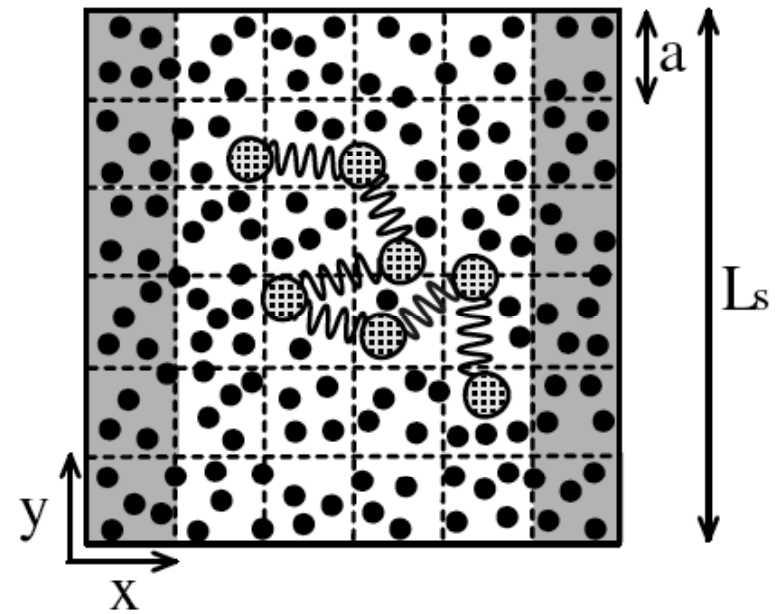
# Simulation illustrates DNA behavior in confined areas

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As researchers have worked to design devices to separate DNA into microchannels, they have discovered that the DNA strands react differently in confined spaces than they do in unbounded regions. Because it is expensive to set up physical experiments to test many different channel shapes, computer simulations are often employed. In this case, Prof. Ron Larson and coworkers at the University of Michigan have used a code to simulate multiparticle collision dynamics. In the figure, the “bead and spring” elements represent DNA, the gray boxes the wall cells and the black dots simulation system particles. By using this test, it was determined that the DNA strands tend to migrate toward the center of the channel as the flow rate is increased. This data will help to design better microfluidic devices.



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