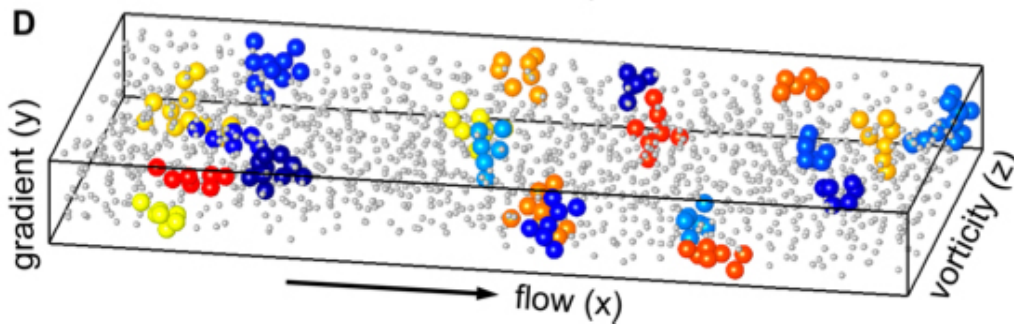


From Paint to Toothpaste, Researchers Capture Microscopic Origin of Thinning and Thickening Fluids

Featured research published in *Science* by UCSB Chemical Engineering Professor Jacob Israelachvili and Cornell Physics Professor Itai Cohen



From an article by Anne Ju on the [Cornell Chronicle](#) website:

Ever wonder why paint is thick enough to stay on a wall but thin enough to spread evenly with a brush? Or, how people can run across a swimming pool filled with a cornstarch-water mixture without sinking? They're both examples of what happens when particles are suspended in fluids.

Cornell scientists led by Itai Cohen, associate professor of physics, have explored why these fluids behave like they do by watching how micron-sized suspended particles dance in real time and space. Their observations are the first to link direct imaging of the particle motions with changes in liquid viscosity under shear -- or equivalently, when the fluid is stirred.

The research is published online Sept. 2 in the journal *Science*. **Read the full article by Anne Ju on the [Cornell Chronicle](#) website.**

Images



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