

Carnegie Mellon University
Materials Science & Engineering

presents

**Dripping, jetting, drops and wetting:
the magic of microfluidics**

Dr. David Weitz

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ABSTRACT:

This talk will discuss the use of microfluidic devices to precisely control the flow and mixing of fluids to make drops, and will explore a variety of uses of these drops. These drops can be used to create new materials that are difficult to synthesize with any other method. These materials have great potential for use for encapsulation and release. I will also show how the exquisite control afforded by microfluidic devices provides enabling technology to use droplets as microreactors to perform reactions at remarkably high rates using very small quantities of fluids.

BIOGRAPHY:

Weitz received his PhD in physics from Harvard University and then joined Exxon Research and Engineering Company, where he worked for nearly 18 years. He then became a professor of physics at the University of Pennsylvania and moved to Harvard at the end of the last millennium as professor of physics and applied physics. He leads a group studying soft matter science with a focus on materials science, biophysics and microfluidics. He is director of Harvard's Materials Research Science and Engineering Center, funded by the National Science Foundation. Several startup companies have come from his lab to commercialize research concepts.

**Doherty Hall 2315, 11:30AM
Friday, January 29, 2016**