

Pre-Lab Exercises

Lab #6: PDMS Microfluidics

MIT Nanomaker_Spring 2013

- 1) **Read the Scientific American article on nanofabrication and PDMS (polydimethylsiloxane).**

- 2) **List a few examples of where you can find PDMS in everyday life:**

- 3) **The article describes a technique called “soft lithography” using PDMS. What is the smallest feature they have been able to make using soft lithography? What might be some of the limitations of soft lithography?**

- 4) **In this lab we’ll be creating microfluidics on glass microscope slide using PDMS and a commercial solid ink printer. What causes the liquid to flow in a PDMS microfluidic system compared to a paper microfluidic system?**

- 5) **What is the difference between hydrophobic and hydrophilic? Is glass hydrophobic or hydrophilic? What about PDMS?**

Weekly Challenge: Make a copy of a key. The copy does not need to be metal, but you must do it yourself!

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