



Nanotech for waterproofing

AIM

To observe the effect of a natural functional nanomaterial with water, and compare it with flat surfaces of paper and foil

YOU WILL NEED

- A plastic Pasteur pipette
- 1-2 mL tap water
- a sheet of paper
- a small square of aluminium foil
- a square of a dried lotus leaf

PROCEDURE

Firstly take a sheet of paper, and drop a droplet of water onto the paper. Look at the droplets side-on, and draw the shape that you see. Tilt the paper and see if the droplet likes to 'stick' to the paper. Repeat this with foil. Finally, take a dried lotus leaf and try this.

QUESTIONS

1. Which material repels the water the most? Which material attracts the water the most?
2. If you wanted to make a water-repellant surface, which surface would you try to replicate?
3. Do both sides of the lotus leaf behave the same?

MICROSCOPE IMAGE OF A LOTUS LEAF, SIDE ON:

