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Building Science

Adventures In Building Science

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- "non-wetable" surface
- water repellent surface
- hydrophobic surface
- water more attracted to itself than to surface
- surface energy of water greater than surface energy of surface
- water "beads up"
- "greasy" surface
- high contact angle " θ "

- "wetable" surface
- non-water repellent surface
- hydroscopic surface
- water more attracted to surface than itself
- surface energy of surface greater than surface energy of water
- water "spreads out"
- "non-greasy" surface
- low contact angle " θ "

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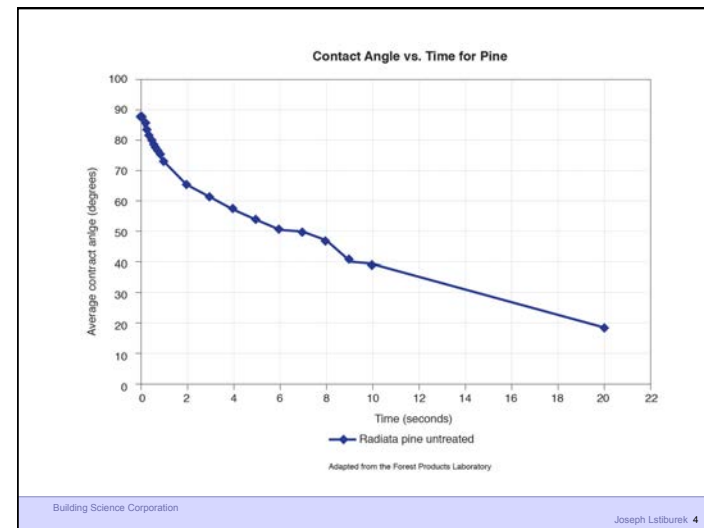
Non-wetting $\theta > 90^\circ$

Partial wetting $\theta = 90^\circ$

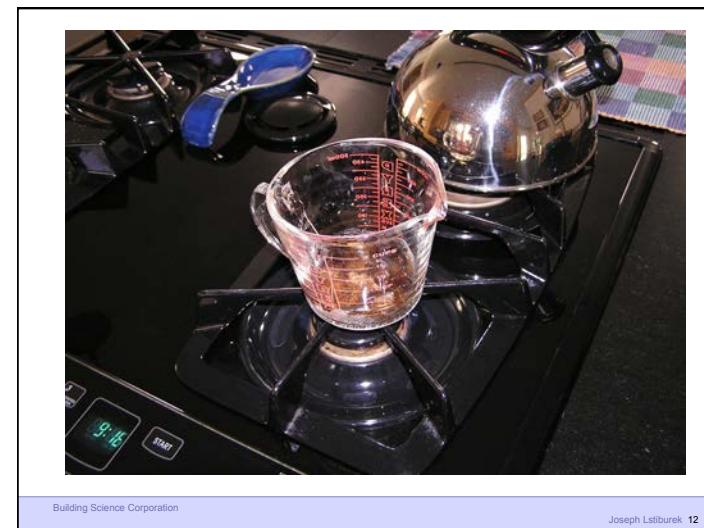
Wetting $\theta < 90^\circ$

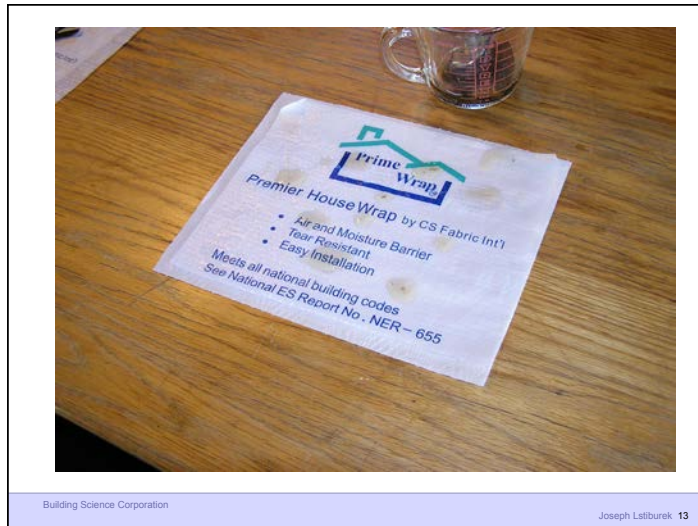
Perfect wetting $\theta = 0^\circ$

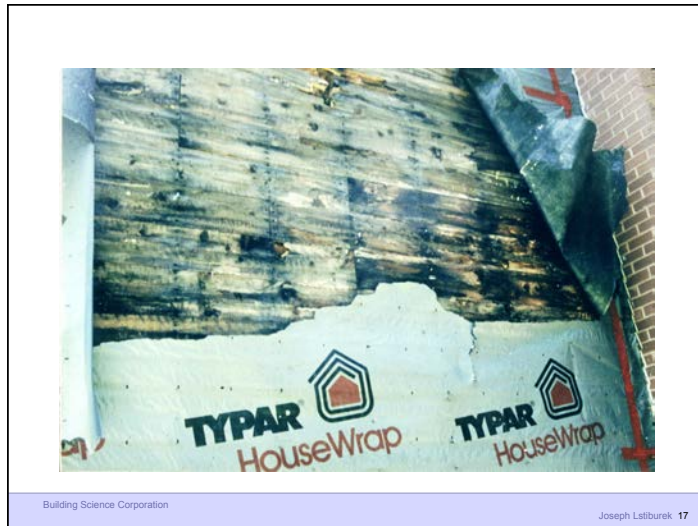
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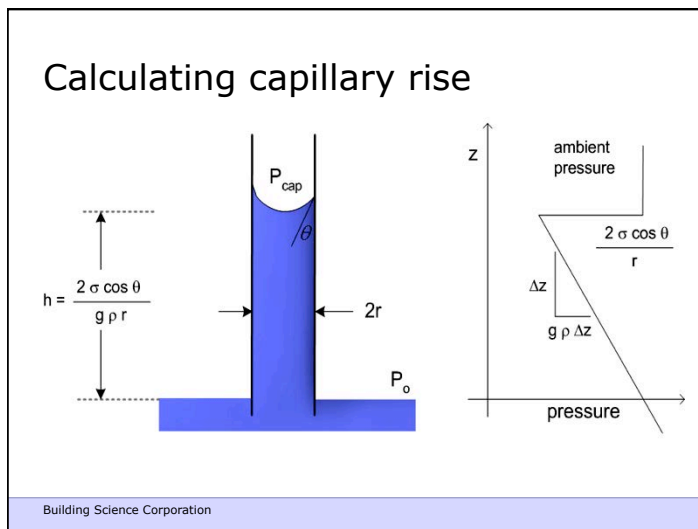
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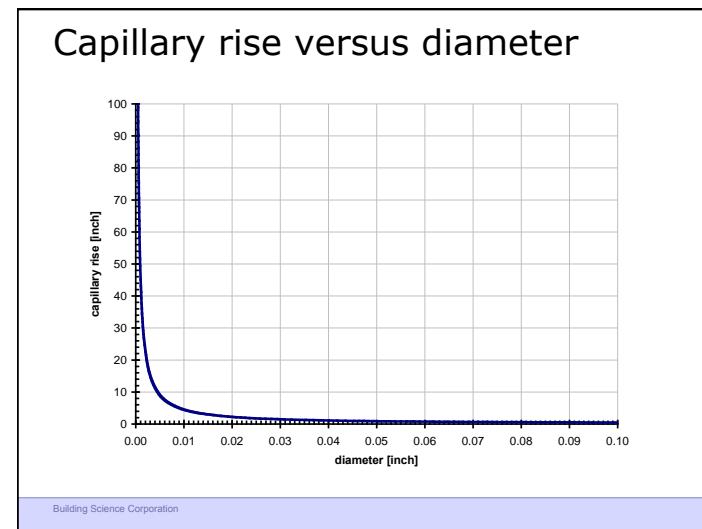
	Surface Energy
Water (20 C)	73 dynes/cm
Water (100 C)	59 dynes/cm
Epoxy	46 dynes/cm
Polyethylene	31 dynes/cm
Soapy water	30 dynes/cm
Paraffin wax	25 dynes/cm
Silicone	24 dynes/cm
Teflon	18 dynes/cm

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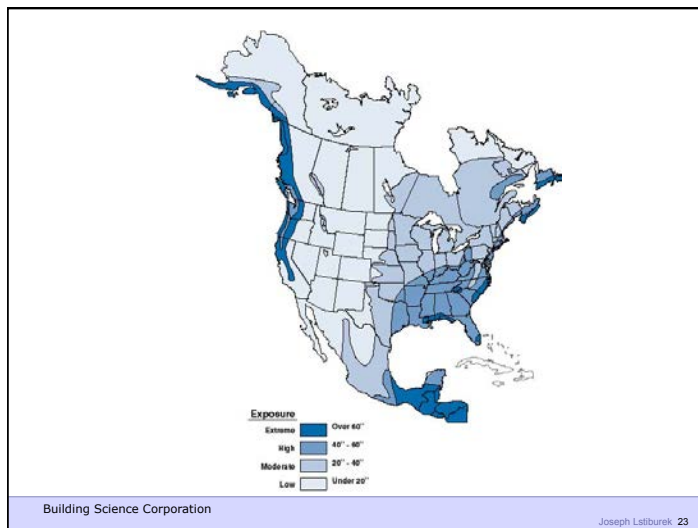
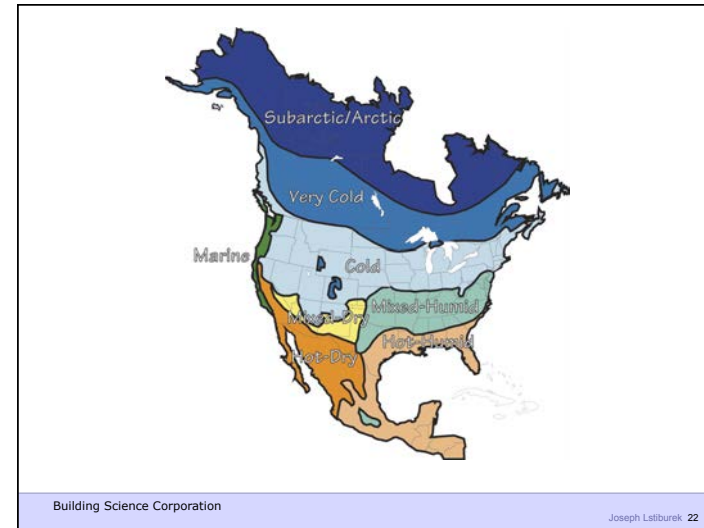
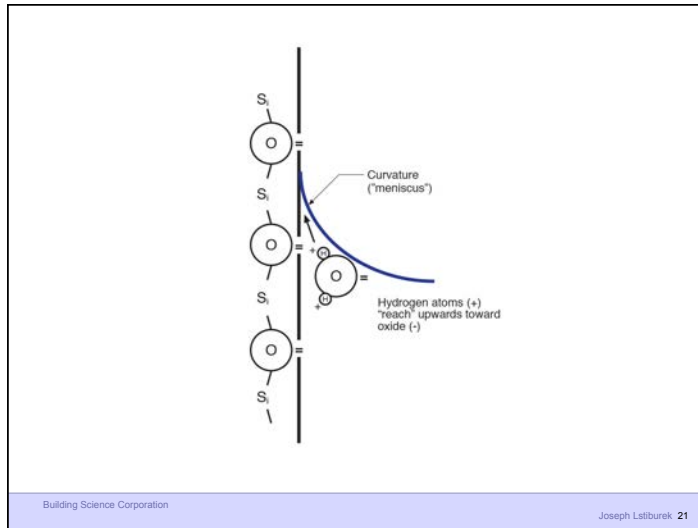
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Don't Do Stupid Things

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