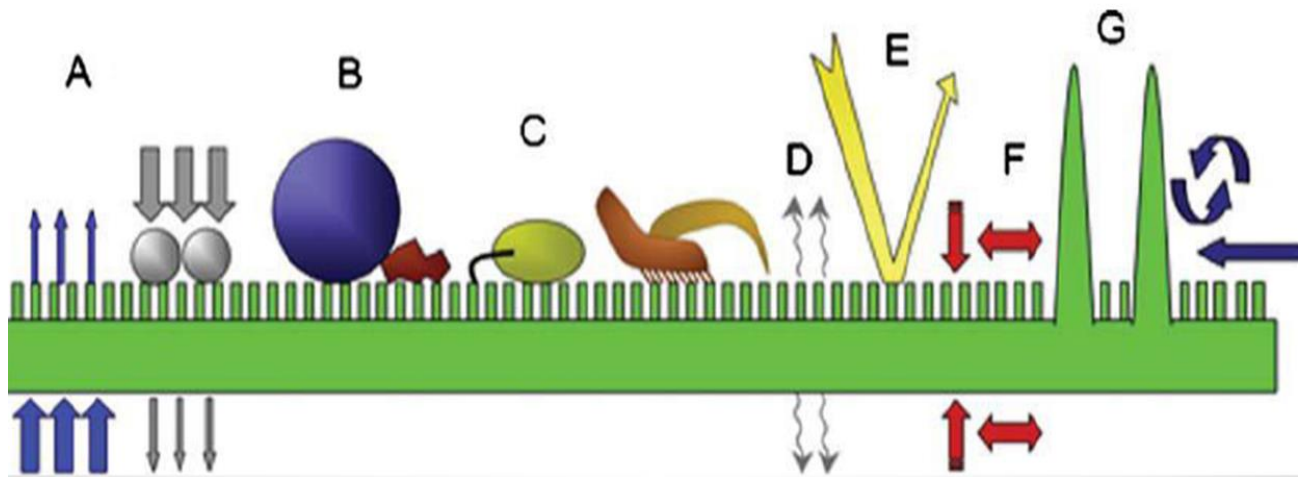


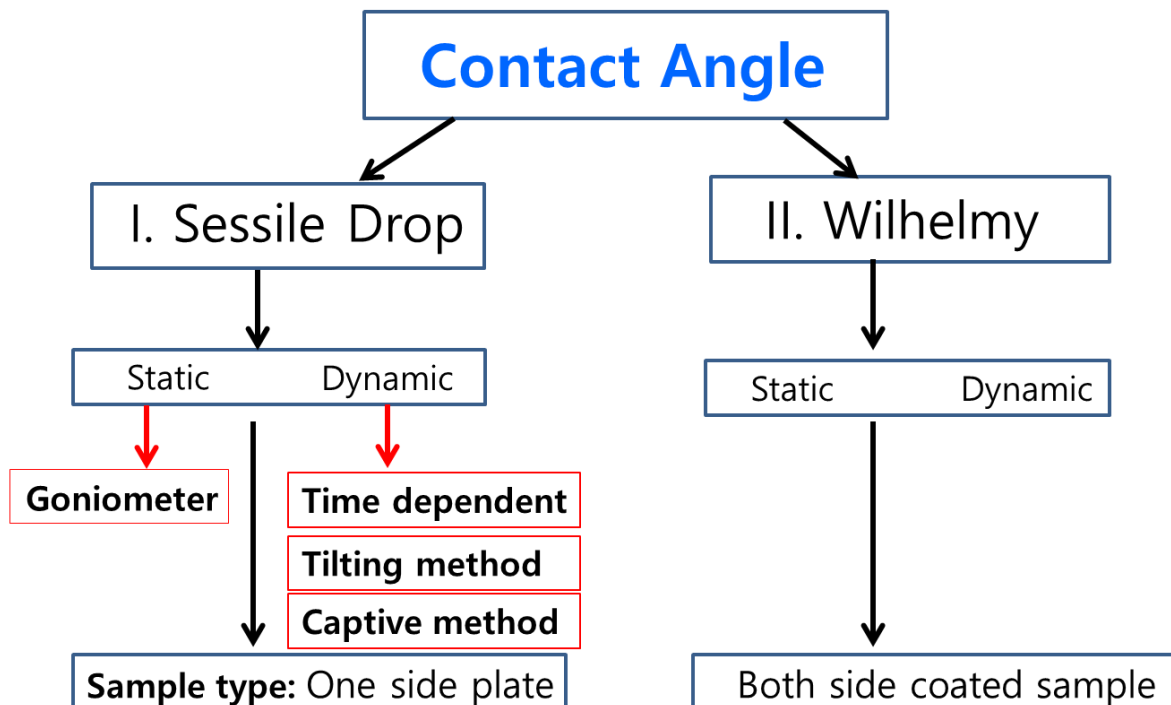
Coatings Properties Research

Contact surface properties such as wetting, cleanliness, adhesion, cohesion can be effectively studied by contact angle analysis.

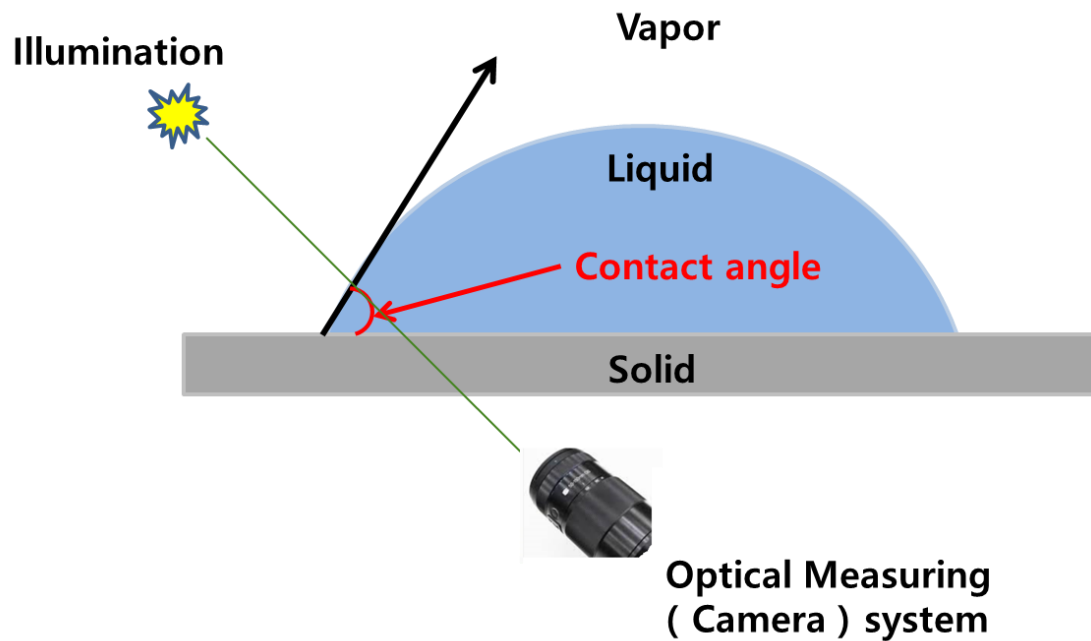


Moisture Adsorption/Desorption , wetting of surface, UV-Vis ., Environmental , Temperature., mechanical property .,etc

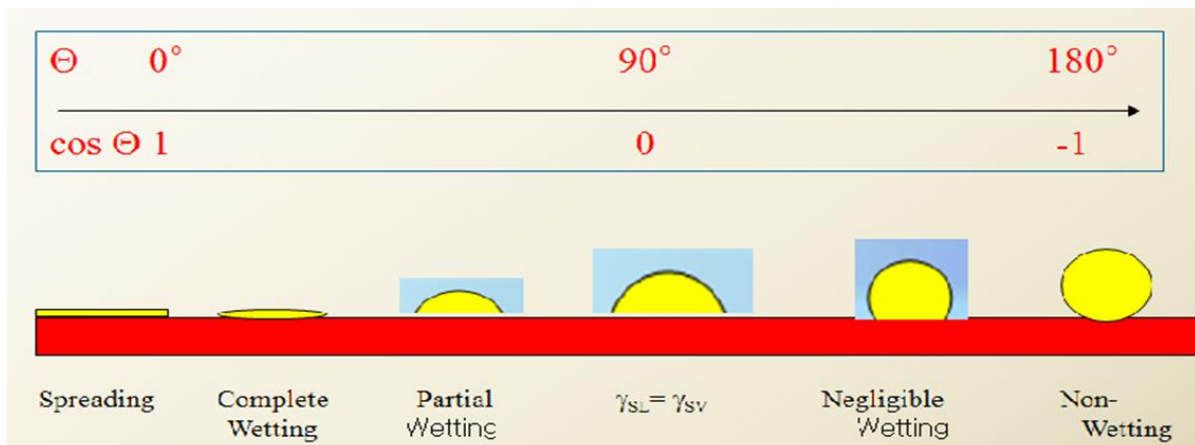
Contact Angle Methods



1. Sessile Drop (Static) Method of Contact Angle Analysis

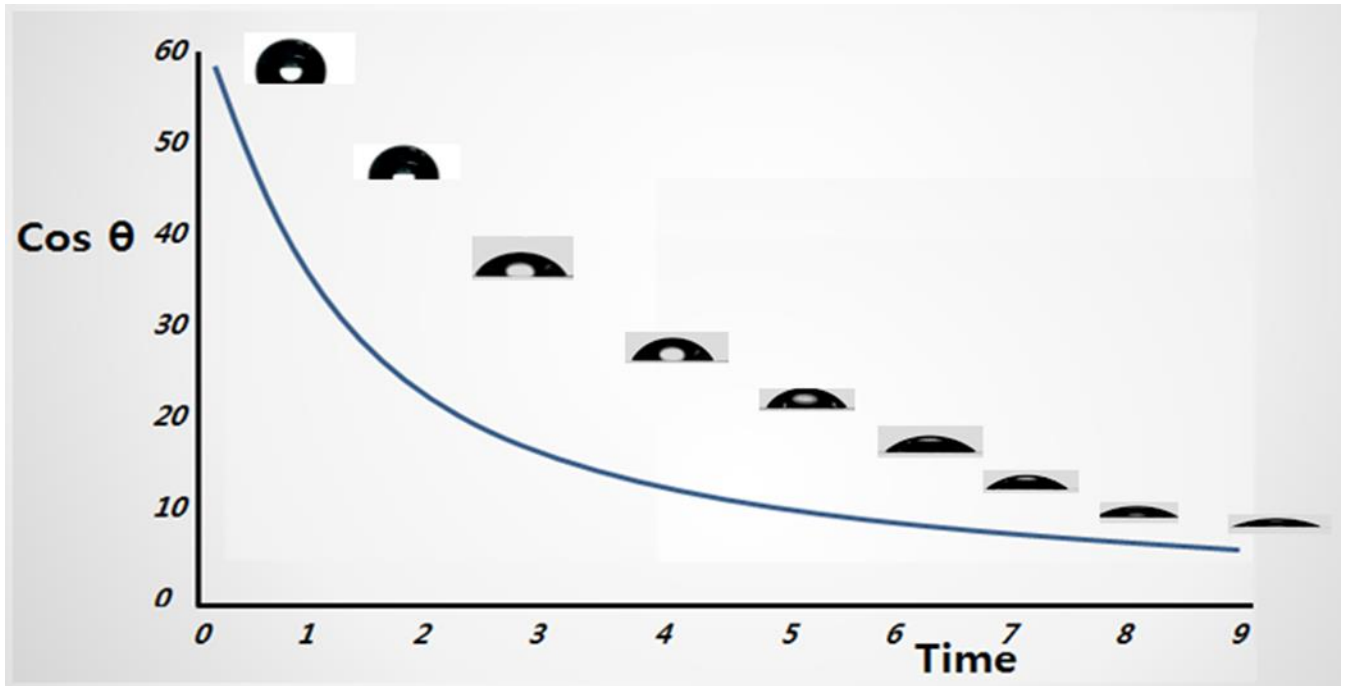


Application Example : Wetting Studies



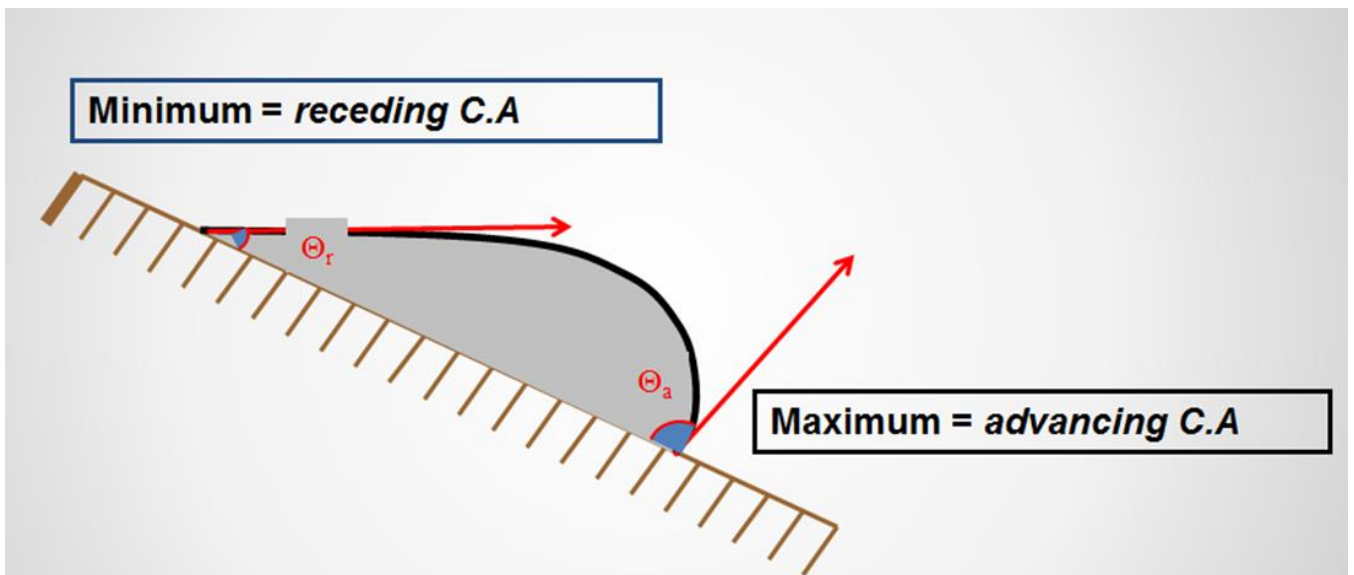
2. Sessile Drop (Dynamic) Contact Angle Analysis

A. Time-Dependent Method - Time-dependent C.A measured by sessile drops of water on the surfaces and monitoring the drop shape as a function of time. It was found that contact angles decreased sharply with contact time and the equilibrium contact angle was finally attained after a certain time.

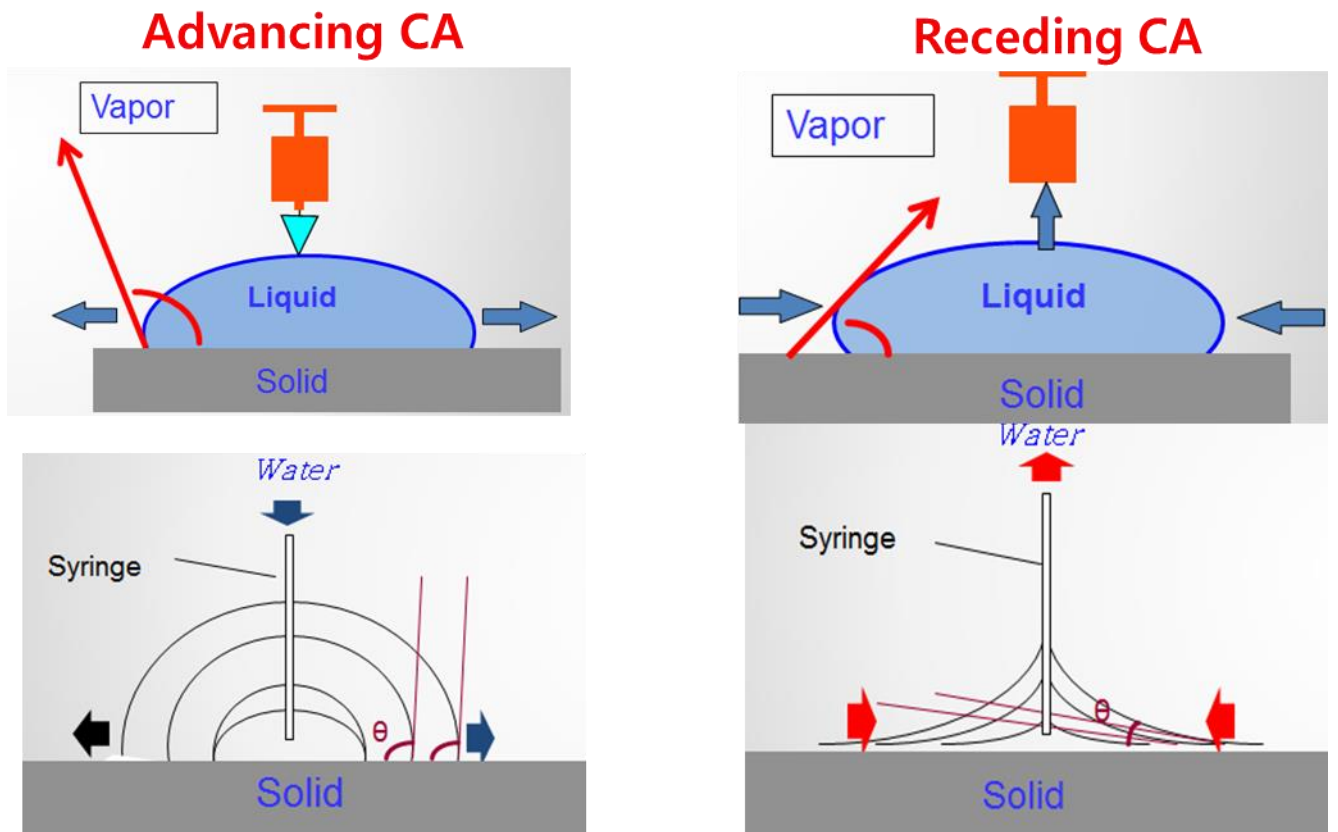


B. Tilting Plate Method- This method is to slowly tilt a contact angle sample until the sessile drop on it begins to move in the downhill direction.

At that time, the downhill contact angle is the advancing contact angle and the uphill angle the receding contact angle.



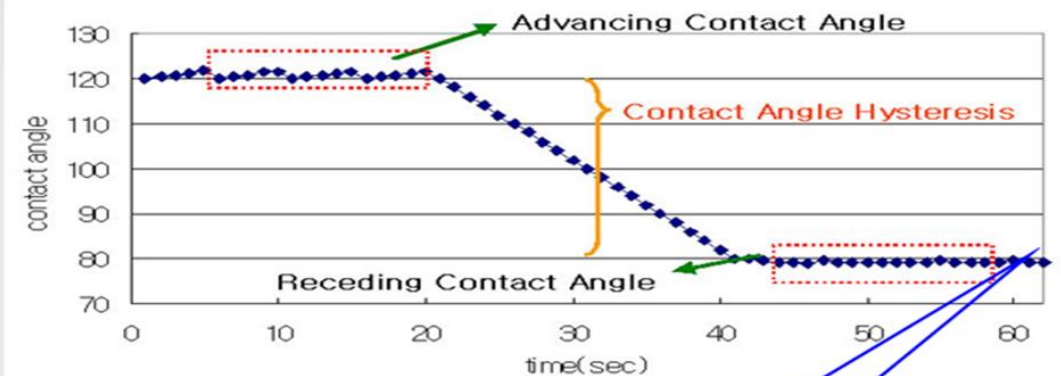
C. Captive Method - By inflating a droplet in contact with a solid surface and increasing and decreasing the size of the droplet, the contact angle is measured when advancing contact angle and receding contact angle.



Application Example : Study of surface coverage , roughness or heterogeneity etc.

$$\text{Hysteresis } (\Delta H) = \text{Adv C.A.} - \text{Rec C.A.}$$

Heterogeneous Surfaces Based on the Model of Johnson and Dettre



Information of

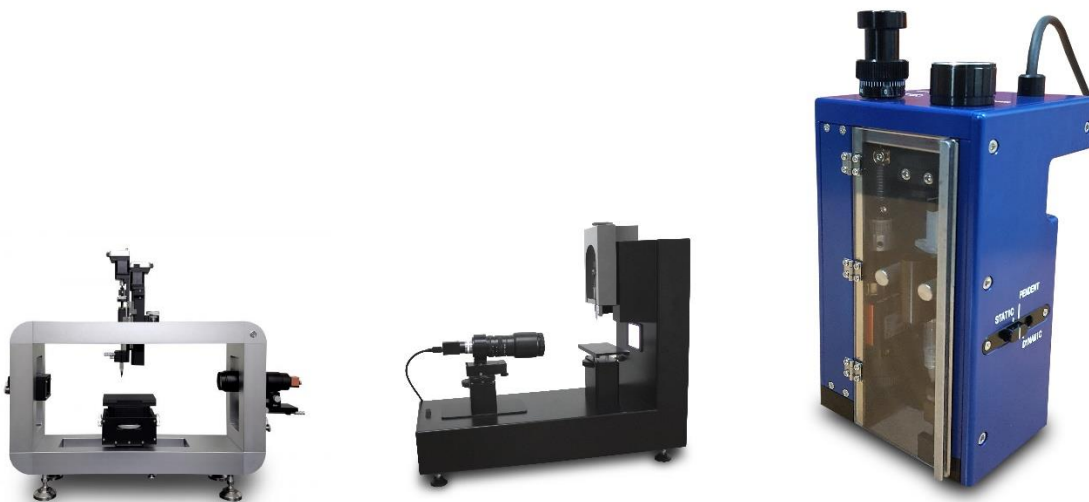
- Coverage \uparrow
- Roughness \downarrow
- Heterogeneity \downarrow

Small ΔH ?

Heterogeneous
Domain Decrease

Instruments Link – Pls put the link to the following instruments

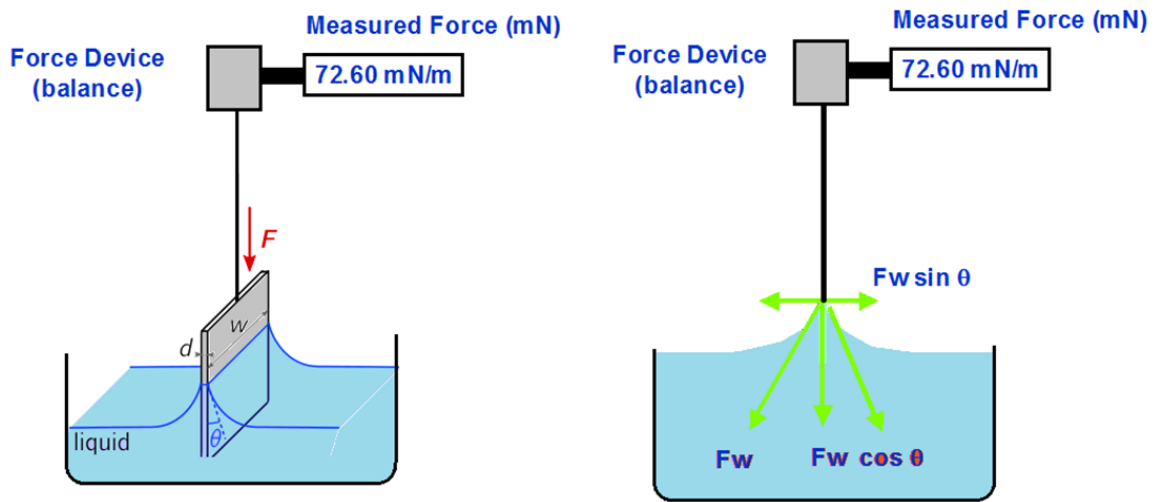
1. Phoenix MT, Phoenix300, Phoenix Smart



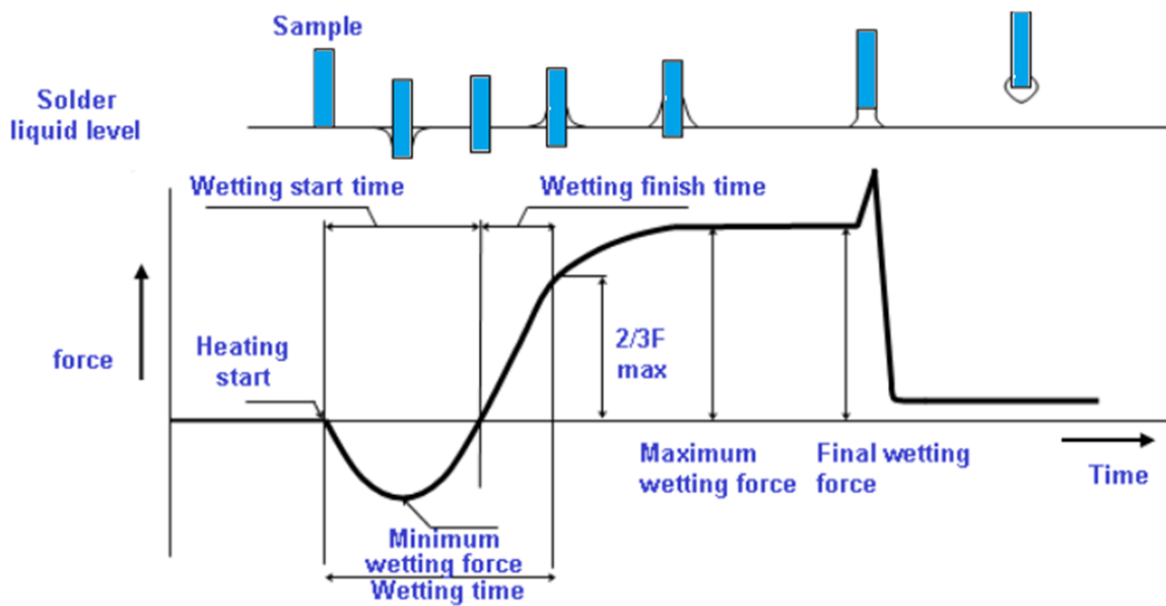
2. Dynamic Contact Angle(Wilhelmy Plate) Method

A Wilhelmy plate is a thin plate that is used to measure an equilibrium surface or interface tension at an air-liquid or liquid-liquid interface. In this

method, the plate is oriented perpendicular to the interface, and the force exerted on it measured.



Application Example: Solder wettability



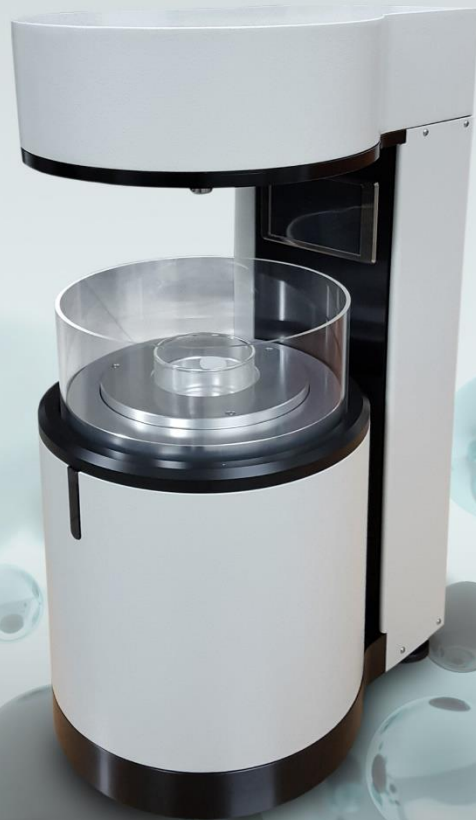
Note: Pls put the url link to the SEO DCA 200 here

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- Pharmaceuticals
- Eye-Care products
- Moisture Barriers
- Semiconductor & Electronics
- LCD, OLED display

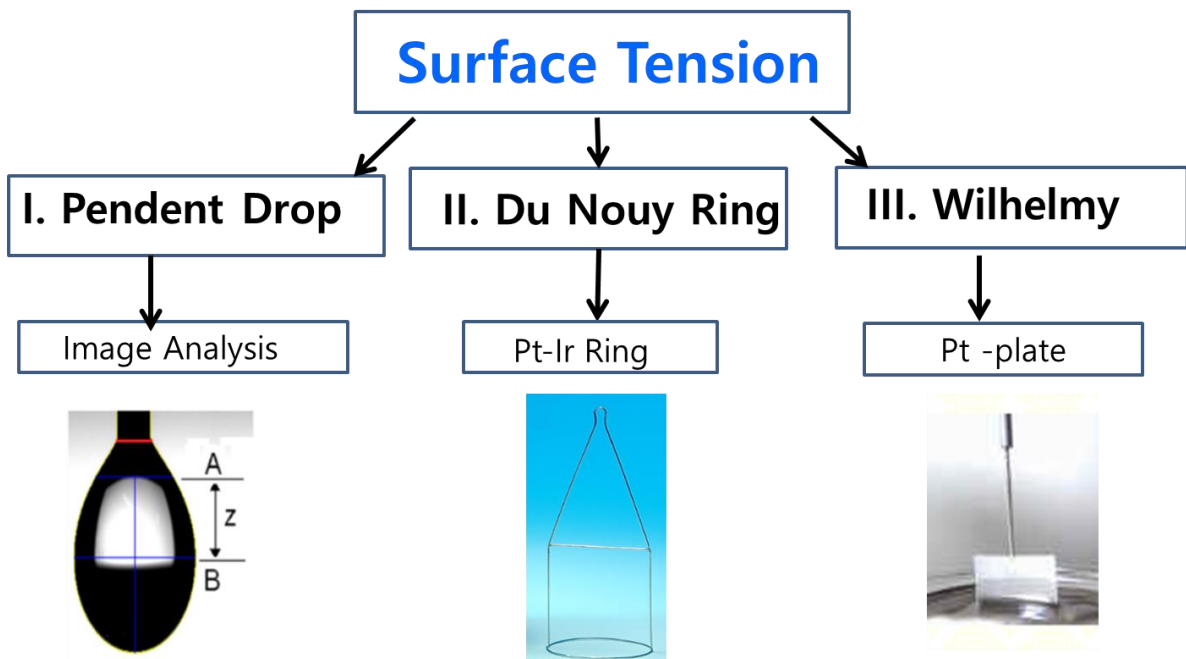


SEO DCA 200



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Surface Tension of Liquids



Note: Pls link the SEO DST series of products

