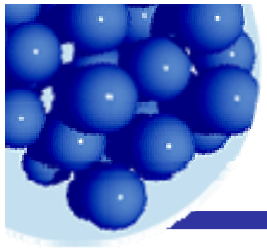

Dispersions in Liquids: Suspensions, Emulsions, and Foams

ACS Short Course

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Philadelphia, PA

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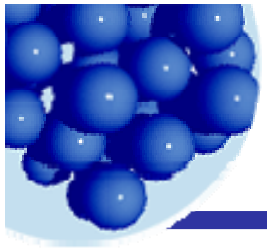
Course lectures

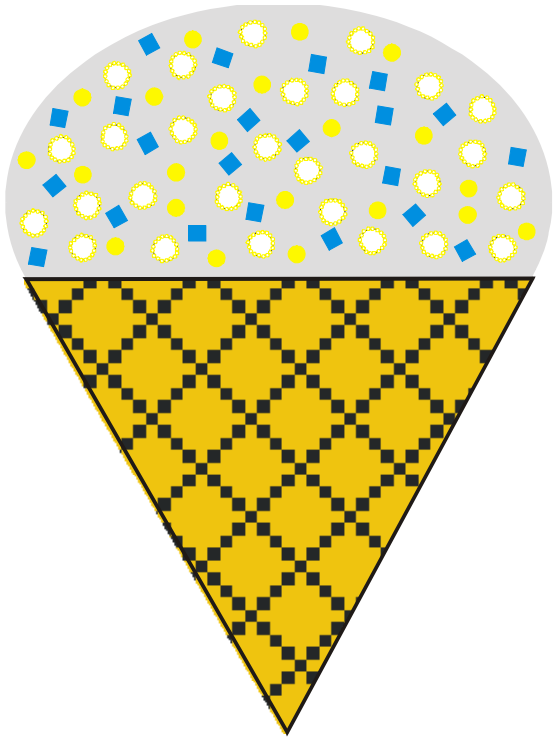
Printed order	Topics	For this class
1	Surfactants	1
2	Polymer stabilization	
3	Electrical stabilization	
4	Emulsions	
5	Foams	
6	Wetting and spreading	
7	Particle sizing	
8	Particle charge and rheology	
9	Milling and dispersion	

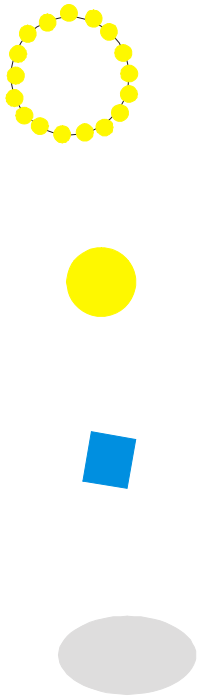
Primary text:

Morrison, I.D.; Ross, S.
Colloidal dispersions: Suspensions, emulsions, and foams;
John Wiley & Sons: New York; **2002**.



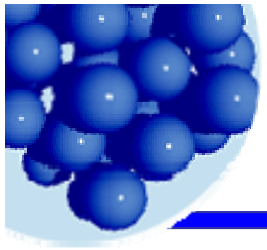
Ice Cream





Ice cream is a:

- Foam of air bubbles,
- Stabilized with small oil drops,
- In a matrix that is,
- A n emulsion of more oil drops
- And a suspension of ice crystals,
- In a continuous phase of surfactants, micelles, and solutes in water
- In a sugar cone.



Etymology

English	Greek	Latin
oil	lipo-	oleo-
water	hydro-	aqua-
solvent	lyo-	solvo-
both	amphi-	
flow	rheo-	
affinity	-philic	
lack-of-affinity	-phobic	
nature	-pathic	
science	-logy	

English meanings are not literal translations.

Technical terms are formed by combinations of these words.

rheology = science of flow

hydrophilic = with affinity for water
lipophilic = with affinity for oil
lyophilic = with affinity for the solvent
hydrophobic = lack of water affinity
lipophobic = lack of oil affinity
lyophobic = lack of affinity for the solvent
amphipathic = combining both natures (oil and water understood)
amphiphilic = with affinity for both (oil and water understood)

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