UNDERSTANDING INTERFACIAL PROCESSES

(*Thermodynamics*)

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MAIN RESEARCH TOPICS

- **Surface Tension**
- **Wetting**
- **Bubbles and Thin Films**
- **Nucleation**

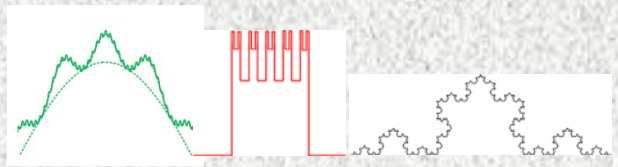
SURFACE TENSION

- **Definition**
- **Interfacial-Surface Tension Correlation**

$$\frac{\sigma_{LF}}{\Phi(\sigma_L,\sigma_F)} = \frac{\sigma_L}{F(\sigma_L)} - \frac{\sigma_F}{F(\sigma_F)}$$

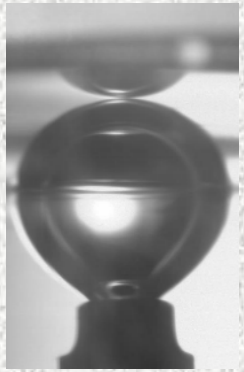
WETTING

- **Characterization of Solid Surfaces**
- **Optimal Super-Hydrophobic Surfaces**



BUBBLES & THIN FILMS

- Removal of Bubbles from Interfaces
- Bubble Coalescence in Electrolyte Solutions
- Stabilization with Particles



NUCLEATION

- **Boiling & Condensation in multi-component, 3-phase systems**
- **Icing**

SMART PEOPLE
GREEN INTERFACES

- **Separation Processes**

Interfacial-Tension-Driven Separation Processes

- **Energy saving**
- **Pollution minimization**

Thank You Very Much!