

Edward Yu. Bormashenko

# PHYSICS OF WETTING

Phenomena and Applications of Fluids on Surfaces

Motivated by a plethora of phenomena from nature, this textbook introduces into the physics of wetting of surfaces. After a brief discussion of the foundations of surface tension, its implementation for floating objects, capillary waves, bouncing droplets, walking of water striders, etc. is discussed. Furthermore, Marangoni flows, surface tension inspired instabilities, condensation and evaporation of droplets, liquid marbles, superhydrophobicity and superoleophobicity (lotus effect) are introduced. All relevant concepts are illustrated by the numerous qualitative and quantitative exercises.

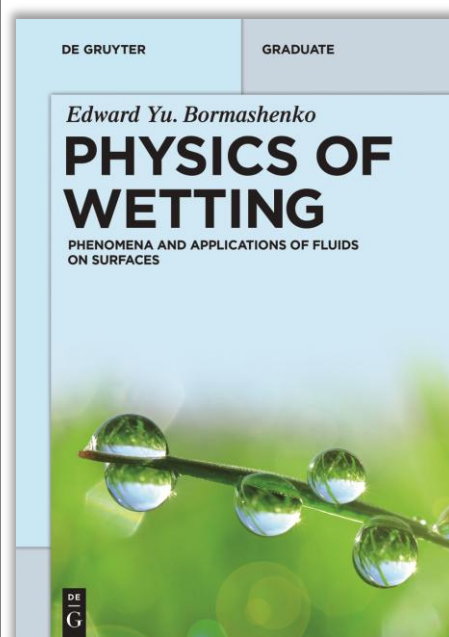
- Wetting of surfaces is at the heart of numerous biological and technological processes.
- Experiments and theory of wetting phenomena are surveyed.
- Each chapter is accompanied by problem sections for deeper understanding



**Edward Yu. Bormashenko** is a professor of chemical engineering and materials science and is the head of the Laboratory of Interface Science at Ariel University in Israel. He is the author of more than 200 publications.

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Physical Chemistry  
Thin Films, Surfaces and Interfaces

**Of interest to**

Students in Physics,  
Materials Science, Chemistry and  
Mechanical and Electrical Engineering.



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