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Wettability of Nanoparticle Decorated Surfaces

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Propositions

Accompanying the PhD thesis

Wettability of Nanoparticle Decorated Surfaces

Weiteng Guo

1. Nanoparticles are ideal candidates to create nanostructured surfaces to study wetting phenomena.
2. Airborne hydrocarbons can significantly affect the wettability of nanostructured surfaces. (Chapter 3)
3. Nanoparticles, before reaching an extremely high surface coverage, can enhance the static contact angle as well as hysteresis of a flat hydrophilic substrate. (Chapter 3&4)
4. Combing polymer techniques and nano science is a promising way to fabricate surfaces with various nano-structured morphologies. (Chapter 4)
5. The wetting contact angles are easy to obtain and measure in most cases, but the theories behind them are usually much more complex. (Chapter 5)
6. The interactions between the liquid testing droplets and the solid surfaces are diverse, one should be very careful when trying to predict a contact angle with theoretical models. (Vitaly Svetovoy)
7. 吾道一以贯之-孔子。(Hold on the principal throughout the entire life and keep practicing. -Confucius)