1. Record Nr. UNINA9910131536003321

Autore	Joud Jean-Charles
Titolo	Physical chemistry and acid-base properties of surfaces / / Jean-Charles Joud, Marie-Genevieve Barthes-Labrousse
Pubbl/distr/stampa	Hoboken, NJ : , : Wiley, , 2015
ISBN	1-119-14541-4 1-119-14538-4 1-119-14539-2
Descrizione fisica	1 online resource (156 p.)
Collana	Focus materials in science series
Disciplina	541.3/3
Soggetti	Surface chemistry Acids-Basicity Technology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Table of Contents; Title; Copyright; Introduction; Chapter 1: Wettability of an Ideal Surface: Overview; 1.1. Wetting angle; 1.2. Adhesion effect; 1.3. Surface tension and free surface energy; Chapter 2: Real Surfaces; 2.1. Wenzel's model - topological defects; 2.2. Cassie-Baxter model: chemical defects; 2.3. Superhydrophilic surfaces; 2.4. Superhydrophobic surfaces; 2.5. Application; Chapter 3: Components of the Surface Energy; 3.1. Overview; 3.2. Molecular interactions and components of the energy; 3.3. The hydrogen bond; 3.4. Lewis acid-base interactions 3.5. The effective components of the interaction energy3.6. Application; Chapter 4: The Acid-Base Component in the Work of Adhesion; 4.1. Overview; 4.2. Use of the acid-base component; 4.3. The Owens-Wendt approximation; 4.4. Van Oss-Good description; Chapter 5: Experimental Determination through Wettability Measurements; 5.1. One liquid method; 5.2. Two liquid method. Surfaces with high surface energy; 5.3. Applications of the two liquid method; 5.4. Comparison between Owens-Wendt and van Oss-Good methods; Chapter 6: Acid-Base Properties of Surfaces: Experimental Approaches; 6.1. Overview

6.2. General methods6.3. Local methods; 6.4. Application examples; Chapter 7: Oxide-Solution Interfaces: Surface Charges; 7.1. Br_nsted acidity and basicity; 7.2. Point of zero charge (PZC); 7.3. The oxide-solution interface; 7.4. Electrocapillarity in the oxide-solution interface; Chapter 8: Electrocapillarity Applications; 8.1. Study based on the pH of the oxide surfaces; 8.2. Study of the stability of a liquid film on an oxide surface; 8.3. Modification of the contact angle by an imposed potential (Electrowetting); Conclusion; Bibliography; Index; End User License Agreement