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| 1. Record Nr.           | UNINA9910141807903321                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Titolo                  | Advances in contact angle, wettability and adhesion [[electronic resource] ] . Volume 1 / / edited by K. L. Mittal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Pubbl/distr/stampa      | Salem, Mass., : Scrivener/Wiley, c2013                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| ISBN                    | 1-118-79561-X<br>1-118-79562-8<br>1-118-79563-6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Descrizione fisica      | 1 online resource (436 p.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Collana                 | Adhesion and adhesives : fundamental and applied aspects                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Altri autori (Persone)  | MittalK. L. <1945->                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Disciplina              | 541/.33                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Soggetti                | Surface chemistry<br>Contact angle<br>Wetting<br>Adhesion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Nota di contenuto       | Cover; Title Page; Copyright Page; Contents; Preface; Acknowledgements; Part 1: Fundamental Aspects; 1 Correlation between Contact Line Pinning and Contact Angle Hysteresis on Heterogeneous Surfaces: A Review and Discussion; 1.1 Introduction; 1.2 Contact Line Pinning on Chemically Heterogeneous Flat Surfaces; 1.3 Contact Line Pinning on Hydrophobic Structured Surfaces; 1.4 Summary and Conclusion; References; 2 Computational and Experimental Study of Contact Angle Hysteresis in Multiphase Systems; 2.1 Introduction; 2.2 Origins of the CA Hysteresis 2.3 Modeling Wetting/Dewetting in Multiphase Systems2.3.1 CA in Multiphase Systems; 2.3.2 CA Hysteresis in Multiphase Systems; 2.4 Experimental Observations; 2.5 Numerical Modeling of CA Hysteresis; 2.5.1 Background; 2.5.2 The Cellular Potts Model; 2.5.3 The Cellular Potts Modeling of Wetting; 2.5.4 Results; 2.6 Conclusions; Acknowledgement; References; 3 Heterogeneous Nucleation on a Completely Wettable Substrate; 3.1 Introduction; 3.2 Interface-Displacement Model; 3.3 Nucleation on a Completely-Wettable Flat Substrate; 3.3.1 d = 2-dimensional Nucleus; 3.3.2 d = 3-dimensional |

Nucleus

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4.2.2 Local Approach - Force Balance; 4.3 Wetting of Single Texture

Element; 4.4 Summary; References; 5 Fundamental Understanding of

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Introduction; 5.2 Discussion; 5.3 Conclusion; References

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Materials and Methods; 6.2.1 Fabricating Hierarchical Polymer Surfaces;

6.2.2 Characterization of the Wetting Properties of Polymer Surfaces;

6.2.3 Plasma Treatment of the Surfaces; 6.2.4 B.E.T Characterization of

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6.3.3 B.E.T Study of the Surfaces6.4 Conclusions; Acknowledgements;

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Model Verification; 7.2.3.1 Force Equilibrium; 7.2.4 Particle-Droplet

Interaction; 7.3 Flow Model; 7.3.1 Governing Equations; 7.3.2 Finite

Element Implementation

7.3.3 Normal and Tangential Velocities at the Boundary

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## Sommario/riassunto

The topic of wettability is extremely important from both fundamental and applied aspects. The applications of wettability range from self-cleaning windows to micro- and nanofluidics. This book represents the cumulative wisdom of a contingent of world-class (researchers engaged in the domain of wettability. In the last few years there has been tremendous interest in the ""Lotus Leaf Effect"" and in understanding its mechanism and how to replicate this effect for myriad applications. The topics of superhydrophobicity, omniphobicity and superhydrophilicity are of much contemporary interest and

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| 2. Record Nr.           | UNINA9910707979003321                                                                                                                                                                                                                                                                                                                           |
| Titolo                  | Oversight of the Federal Bureau of Investigation : hearing before the Committee on the Judiciary, House of Representatives, One Hundred Fourteenth Congress, second session, September 28, 2016                                                                                                                                                 |
| Pubbl/distr/stampa      | Washington : , : U.S. Government Publishing Office, , 2016                                                                                                                                                                                                                                                                                      |
| Descrizione fisica      | 1 online resource (iii, 125 pages) : illustration                                                                                                                                                                                                                                                                                               |
| Soggetti                | Security classification (Government documents) - United States<br>Electronic mail messages - Government policy - United States<br>Electronic mail systems - Security measures - United States<br>Web servers - Security measures - United States<br>Electronic government information - Access control - United States<br>Legislative hearings. |
| Lingua di pubblicazione | Inglese                                                                                                                                                                                                                                                                                                                                         |
| Formato                 | Materiale a stampa                                                                                                                                                                                                                                                                                                                              |
| Livello bibliografico   | Monografia                                                                                                                                                                                                                                                                                                                                      |
| Note generali           | Paper version available for sale by the Superintendent of Documents, United States Government Publishing Office.<br>"Serial no. 114-91."                                                                                                                                                                                                        |
| Nota di bibliografia    | Includes bibliographical references.                                                                                                                                                                                                                                                                                                            |