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Descrizione fisica	1 online resource (xxi, 393 pages) : digital, PDF file(s)
Collana	Cambridge series in chemical engineering
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Altri autori (Persone)	WagnerNorman Joseph <1962->
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Nota di contenuto	1. Introduction to colloid science and rheology -- 2. Hydrodynamic effects -- 3. Brownian hard spheres -- 4. Stable colloidal suspensions -- 5. Non-spherical particles -- 6. Weakly flocculated suspensions -- 7. Thixotropy -- 8. Shear thickening -- 9. Rheometry of suspensions -- 10. Suspensions in viscoelastic media -- 11. Advanced topics.
Sommario/riassunto	Colloidal suspensions are encountered in a multitude of natural, biological and industrially relevant products and processes. Understanding what affects the flow behaviour, or rheology, of colloid particles, and how these suspensions can be manipulated, is important for successful formulation of products such as paint, polymers, foods and pharmaceuticals. This book is the first devoted to the study of

colloidal rheology in all its aspects. With material presented in an introductory manner, and complex mathematical derivations kept to a minimum, the reader will gain a strong grasp of the basic principles of colloid science and rheology. Beginning with purely hydrodynamic effects, the contributions of Brownian motion and interparticle forces are covered, before the reader is guided through specific problem areas, such as thixotropy and shear thickening; special classes of colloid suspensions are also treated. On line resources include: questions and solutions for self-study, updates, and links to further resources.