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Autore	Wang Dianzuo
Titolo	Flotation Reagents: Applied Surface Chemistry on Minerals Flotation and Energy Resources Beneficiation : Volume 1: Functional Principle / / by Dianzuo Wang
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Descrizione fisica	1 online resource (XIV, 382 p. 96 illus., 16 illus. in color.)
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Soggetti	Mineral resources Chemical engineering Materials—Surfaces Thin films Mineral Resources Industrial Chemistry/Chemical Engineering Surfaces and Interfaces, Thin Films
Lingua di pubblicazione	Inglese
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Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Introduction -- Interaction between Minerals and Reagents -- Structure and Property of Polar Group of Collector -- Structure and Property of Non-polar Group of Collector -- Structure relationship Between Polar and Non-polar Group in Collector Molecule -- Theoretical Criteria and Calculation for Collector Performance -- Structure and Performance of Frother -- Structure and Performance of Organic Depressant -- Structure and Performance of Flocculant -- Molecular Design of Reagents for Mineral Processing.
Sommario/riassunto	This book summarizes the author's findings on the functional principle of flotation reagents, gathered over the past few decades. The fundamentals of and approaches common to surface chemistry are applied to study the reagents' structure and performance, as well as their interaction with minerals. In particular, the book establishes the theoretical criteria for collector performance. It also includes the quantum chemistry parameters, steric configuration, HOMO and LUMO surface of various reagents. The book offers a valuable resource for all

university graduate students, researchers and R&D engineers in minerals processing and extractive metallurgy who wish to explore innovative reagents and technologies that lead to more energy efficient and environmentally sustainable solutions.
