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| Sommario/riassunto | It is well-known that colloid and interface science and petroleum production are inextricably linked. Whether in the reservoir, with its porous structure, or during recovery, crude oil is intimately associated with rock surfaces and with water, often in the form of emulsions. This situation leads to highly complex systems, comprising multiple colloids and interfaces, which require to be optimized if oil is to be recovered efficiently, both in terms of economic cost and with due concern for the environment. This book contains a compilation of contemporary research topics which illustrate various aspects of the importance of colloids and interfaces in crude oil recovery through modifying conditions between the rock, crude oil, and water in the reservoir, in order to achieve improved oil recovery. The specific topics covered relate both to conventional oils, in which waterflooding is the most common secondary and tertiary means of recovery, and to non-conventional heavy oil and natural bitumen, which require thermal recovery methods, owing to their high viscosity. |