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Descrizione fisica	1 online resource (XIV, 174 p. 72 illus., 36 illus. in color.)
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Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Preface -- Particulate charging phenomena in multiphase flows.- Basic theory of droplet charging in multiphase flows.- Basic theory of particle charging in multiphase flows.- Research methodologies of particulate charging processes -- References.
Sommario/riassunto	This book introduces comprehensive fundamentals, numerical simulations and experimental methods of electrification of particulates entrained multiphase flows. The electrifications of two particulate forms, liquid droplets and solid particles, are firstly described together. Liquid droplets can be charged under preset or associated electric fields, while solid particles can be charged through contact. Different charging ways in gas (liquid)-liquid or gas-solid multiphase flows are summarized, including ones that are beneficial to industrial processes, such as electrostatic precipitation, electrostatic spraying, and electrostatic separation, etc., ones harmful for shipping and powder

industry, and ones occurring in natural phenomenon, such as wind-blown sand and thunderstorm. This book offers theoretical references to the control and utilization of the charging or charged particulates in multiphase flows as well.