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Altri autori (Persone)	LiYaqing HerisSaeid Zeinali ShuChi-Min
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Nota di contenuto	1. Introduction -- 2. Characterization of coal molecules and their surface structures -- 3. Modelling of coal auto-ignition reactive groups and their weak interactions with extractants -- 4. Ultrasonic extraction of coal reactive groups and microstructure evolution pattern -- 5. Oxidation characteristics of spontaneous combustion active groups before and after coal extraction.
Sommario/riassunto	This book provides a scientific basis for development of targeted inhibitors and directional inhibitors of preventing spontaneous combustion of coal. This book applied solvent extraction assisted by ultrasonic into the study of coal spontaneous combustion and hence broken through the technical bottlenecks of existing studies for mechanisms of coal spontaneous combustion. Further, the theories of particles physics were firstly combined with theories of coal chemistry and finally explained some previous conjectures scientifically in this book. Thus, the theory of spontaneous combustion of coal has been

greatly broadened and deepened. Moreover, a new theory named “Chain self-promoted oxidizing coal spontaneous combustion theory induced by active group” was proposed in this book. This theory elucidates the correlation mechanism between coal active groups and indicator gases, explaining the mechanism of indicator gas generation in coal spontaneous combustion and providing a theoretical basis for establishing an early warning indicator system for coal spontaneous combustion. This is very easy to be understood by audience with working in the field of mining or coal chemistry. Besides, principles of theories used in this book were explained in detail in this book. That is to say, there are almost no challenges or pain points for the audiences to overcome.