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Nota di contenuto	Intro -- COAGULATION -- COAGULATION -- CONTENTS -- PREFACE -- A NEW APPROACH TO THE THEORY OF BROWNIAN COAGULATION AND DIFFUSION-LIMITED REACTIONS -- Abstract -- 1. Part 1. Brownian Coagulation Theory -- 1.1. Introduction -- 1.2. Diffusion Relaxation in Ensemble of Brownian Particles -- 1.3. Coagulation Rate Equation -- 1.3.1. Applicability of the Diffusion Approach to Particles Coagulation -- 1.3.2. Diffusion Mixing Condition -- 1.4. Kinetic Regime: High Collision Frequency ( $0 < c < c_c$ ) -- 1.5. Kinetic Regime: Low Collision Frequency ( $0 < c < c_c$ ) -- 1.5.1. Continuum Mode ( $Ra < Ra_c$ ) -- 1.5.2. Free Molecular Mode ( $Ra > Ra_c$ ) -- 1.5.3. Transition Mode ( $Ra \approx Ra_c$ ) -- 1.5.4. Interpolation Formulas -- 1.5.5. Applicability Range of the Kinetic Approach -- 1.6. Next Approximation of the Random Walk Theory -- 1.6.1. Brownian Particles Coagulation -- 1.6.2. Heavy Vapor Molecules Condensation -- 1.7. Discussion -- CONCLUSION -- 2. Part 2. Diffusion-Limited Reaction Rate Theory -- 2.1. Introduction -- 2.2. Rate Equations -- 2.2.1. Applicability of the Diffusion Approach to Particles Collisions -- 2.2.2. Diffusion Mixing Condition -- 2.2.3. Applicability of the Reaction Rate Equation -- 2.3. Reaction Rate in 3-D Case -- 2.3.1. Continuum Mode ( $BAABBArrRaa, < c < c_c$ ) -- 2.3.2. Free Molecular Mode ( $BAABBaaR, > c > c_c$ ) -- 2.4. Reaction Rate in 2-D Case -- 2.5. Reaction Rate on 3-D Discrete Lattice -- 2.6. Reaction Rate on 2-D Discrete Lattice -- CONCLUSION -- APPENDIX -- ACKNOWLEDGMENTS

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CONCLUSION -- Authors' CONTRIBUTIONS -- ACKNOWLEDGEMENTS -- REFERENCES -- COAGULATION: KINETIC, STRUCTURE, FORMATION AND DISORDERS -- Abstract -- 1. Introduction -- 2. Kinetics of Coagulation Systems and Clot Formation -- 2.1. Primary Hemostasis -- 2.2. Coagulation Is Constituted by Interacting Elements -- 2.3. The Extrinsic Route of Coagulation -- 2.4. The Intrinsic Route of Coagulation -- 2.5. The Cellular Model of Coagulation -- 2.6. Activation of the Coagulation System -- 3. Kinetics -- 3.1. Coagulation and Inflammatory Components -- 3.2. Coagulation and Interaction with Endothelial Cells and Leukocytes -- 3.3. Cross-Talk between Clotting and Complement System (C) -- 4. Disorders -- 4.1. Thrombophilia -- 4.1.1. Acquired Factors Associated to Thrombosis -- 4.1.1.1. Procoagulant States and Their Association with Humoral Immunity -- 4.1.1.2. Concepts of Antibodies in Thrombophilia -- 4.2. Genetic Factors Associated to Thrombophilia -- 4.2.1. Deficiency of Antithrombin III -- 4.2.2. Deficiency of Protein C -- 4.2.3. Deficiency of Protein S -- 4.2.4. Mutation of Factor V -- 4.2.5. Mutation G20210A of Prothrombin -- CONCLUSION -- REFERENCES -- FLOC CHARACTERISTICS AND THE INFLUENCING FACTORS -- ABSTRACT -- 1. INTRODUCTION -- 2. MATERIALS AND METHODS -- 2.1. Coagulant Preparation and Characteristics -- 2.2. Water Samples -- 2.3. Jar Tests and Floc On-Line Monitor -- 3. CHARACTERIZATION OF FLOCS FORMED BY DIFFERENT AL-BASED COAGULANTS -- 3.1. Floc Formation, Breakage and Re-Growth -- 3.2. Effect of Shear Rate on Floc Size -- 3.3. Floc Fractal Structure Analysis -- 4. EFFECT OF PH ON FLOC PROPERTIES -- 4.1. Effect of PH on Coagulation Efficiency -- 4.2. Effect of PH on Floc Formation, Breakage and Re-Growth -- 4.3. Effect of PH on Floc Fractal Structures -- CONCLUSION -- REFERENCES.

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Sommario/riassunto

This book presents topical research in the study of the kinetics, structure formation and disorders related to coagulation. Topics discussed include Brownian coagulation and diffusion-limited reactions; deregulation of coagulation during sepsis-induced disseminated intravascular coagulation; substrate induced coagulation (SIC) in aqueous and non-aqueous media for the preparation of advanced battery materials and neonatal coagulation problems. (Imprint: Nova)

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