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Nota di contenuto	Title Page; Table of Contents; Preface; References; 1 Solution Chemistry of Iron; 1.1 Iron Chemistry; 1.2 Interactions of Iron with Dioxygen and Chemistry of Oxygen Free Radicals; 1.3 Hydrolysis of Iron Salts; 1.4 Formation and Characterisation of Ferrihydrite; 1.5 Ageing of Amorphous Ferrihydrite to more Crystalline Products; 1.6 Biomineralisation; 1.7 Magnetite Biomineralisation by Magnetotactic Bacteria; References; 2 The Essential Role of Iron in Biology; 2.1 Introduction: Iron an Essential Element in Biology; 2.2 Physical Techniques for the Study of Iron in Biological Systems 2.3 Classes of Iron Proteins; 2.4 Haemoproteins; 2.5 Iron-Sulphur Proteins; 2.6 Non-haem, Non-Fe-S Proteins; 2.7 The Dark Side of Iron: ROS, RNS and NTBI; References; 3 Microbial Iron Uptake; 3.1 Introduction; 3.2 Iron Uptake from Siderophores; 3.3 Fe2+ transport Systems; 3.4 Iron Release from Siderophores in the Cytoplasm; 3.5 Intracellular Iron Metabolism; 3.6 Control of Gene Expression by Iron; References; 4 Iron Acquisition by Pathogens; 4.1 Introduction; 4.2 Host Defence Mechanisms, Nutritional Immunity; 4.3 Pathogenicity and PAIs; 4.4 Pathogen-specific Iron Uptake Systems 4.5 Role of Fur and Fur Homologues in Virulence; 4.6 Role of Pathogen ECF Sigma Factors; 4.7 Fungal Pathogens; References; 5 Iron Uptake by Plants and Fungi; 5.1 Iron Uptake by Plants; 5.2 Iron Metabolism and