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4.8 The Advent of Group Theory in Bonino's Work4.9 Bonino's Quantum Mechanical Concept of Coordination; 4.10 Encroaching Political Developments; 4.11 Conclusion; References and Notes; 5. Between Disciplines: Jean Barriol and the Theoretical Chemistry Laboratory in Nancy; 5.1 Inspirations; 5.2 Mathematics; 5.3 Quantum Chemistry; 5.4 Pragmatism; 5.5 The Foundations; 5.6 Experiment; 5.7 Jean Barriol's Theoretical Chemistry; References and Notes; Part II From Radiochemistry to Nuclear Chemistry and Cosmochemistry; 6. From Radiochemistry to Nuclear Chemistry and Cosmochemistry

6.1 Physical Evidence in Chemical Disciplines6.2 Identification and Production; 6.3 Natural Versus Artificial Elements; 6.4 Discipline Dynamics; References and Notes; 7. The Discovery of New Elements and the Boundary Between Physics and Chemistry in the 1920s and 1930s. The Case of Element 43 and 75; 7.1 Rhenium: A Success; 7.2 A Failure: Masurium; 7.3 A Comparison: From Hunting to Breeding; 7.4 The End of a Research Tradition; References and Notes; 8. The Search for Artificial Elements and the Discovery of Nuclear Fission; References and Notes

9. From Geochemistry to Cosmochernistry: The Origin of a Scientific Discipline, 1915-1955

Sommario/riassunto

Chemistry in the last century was characterized by spectacular growth and advances, stimulated by revolutionary theories and experimental breakthroughs. Yet, despite this rapid development, the history of this scientific discipline has achieved only recently the status necessary to understand the effects of chemistry on the scientific and technological culture of the modern world.This book addresses the bridging of boundaries between chemistry and the other ""classical"" disciplines of science, physics and biology as well as the connections of chemistry to mathematics and technolog