MONOGRAPHS ON INORGANIC AND PHYSICAL CHEMISTRY. THE CHEMISTRY OF THE RADIO-ELEMENTS, PART II: THE RADIO-ELEMENTS AND THE PERIODIC LAW

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FREDERICK SODDY

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EDITED BY ALEXANDER FINDLAY, D.Sc.

THE CHEMISTRY OF THE RADIO-ELEMENTS

PART II

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BY

FREDERICK SODDY, F.R.S.

LECTURER IN PHYSICAL CHEMISTRY AND RADIOACTIVITY IN THE UNIVERSITY OF GLASGOW

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PART II

INTRODUCTION

"THE Chemistry of the Radio-Elements" dealt with the subject from a standpoint more or less original at the time it was published in 1911, and certain views were expressed tentatively (I, pp. 24–30) more as an individual opinion than a settled judgment, which have since developed. The extension not only constitutes a great simplification of the subject itself, but also has the most intimate and fruitful connection with the theories of chemistry in general, and in particular with the Periodic Law. The present monograph attempts to deal with these advances briefly in the form of a continuation or second part of the original one.

In the first place, the method of treating each radio-element as the chemical analogue of one or other of the known elements, from which it could not be separated and with which it was, as far as could be seen, chemically identical, whereby the chemical character of the radio-elements in question could be "accurately described in a single sentence," can now be shown to be general. Probably not one of the numerous new radio-elements possesses a unique chemical character unshared by others, and the chemistry of the thirty-four individuals now recognised becomes in consequence the chemistry of a much smaller number—about ten in all—of types of elements. Of these, five were known long before radioactivity, and the other five have been subsequently recognised as the direct result of that discovery.