



# CONTENTS

|   |     |
|---|-----|
| EDITOR'S PREFACE  | vii |
| AUTHOR'S PREFACE  | ix  |
| INTRODUCTION  | xi  |
| CHAPTER I. THE DISCOVERY AND NATURAL OCCURRENCE OF RUBIDIUM AND CAESIUM                 | 1   |
| CHAPTER II. PROPERTIES OF RUBIDIUM AND CAESIUM AND THEIR COMPOUNDS                      | 8   |
| 1. Physical and chemical properties of the elements                                     | 8   |
| 2. Compounds of rubidium and caesium with oxygen and hydrogen                           | 15  |
| 3. Compounds of rubidium and caesium with nitrogen, boron, germanium and other elements | 19  |
| 4. Intermetallic compounds of rubidium and caesium                                      | 22  |
| 5. Simple salts of rubidium and caesium   | 25  |
| 6. Double salts and complex inorganic and organic compounds of rubidium and caesium     | 47  |
| CHAPTER III. SYSTEMS FORMED BY RUBIDIUM AND CAESIUM SALTS                               | 57  |
| CHAPTER IV. THE ANALYTICAL CHEMISTRY OF RUBIDIUM AND CAESIUM                            | 72  |
| 1. Qualitative analysis   | 72  |
| 2. Quantitative determination   | 84  |
| CHAPTER V. THE EXTRACTION OF RUBIDIUM AND CAESIUM FROM MINERALS AND ORES                | 99  |
| 1. Extraction of rubidium and caesium from lepidolites                                  | 101 |
| 2. Extraction of caesium from pollucites  | 103 |
| 3. Extraction of rubidium from carnallites  | 107 |
| 4. Processing of other types of material  | 112 |

|  |     |
|--|-----|
| CHAPTER VI. THE PREPARATION OF THE METALS AND VARIOUS COMPOUNDS<br>OF RUBIDIUM AND CAESIUM | 114 |
| 1. The production of rubidium and caesium metals   | 115 |
| 2. The electrochemistry of rubidium and caesium  | 121 |
| REFERENCES   | 129 |
| ADDITIONAL REFERENCES (1960-1964)  | 139 |
| OTHER TITLES IN THE INTERNATIONAL SERIES OF MONOGRAPHS<br>ON NUCLEAR ENERGY                | 145 |

