

Contents

Preface	V	<i>Chapter 14</i> Tectonic Effects	94
Part I: The Textural Patterns of Ore Minerals and Their Genetic Significance		<i>Chapter 15</i> Weathering and Alteration of Ore Minerals	98
<i>Chapter 1</i> Introductory Concepts	1	<i>Chapter 16</i> Leaching, Diffusion and Element Concentration	103
<i>Chapter 2</i> Consideration of the Concepts of Paragenesis, Temperature Determination and Replacement, Based on Edward's Book	8	<i>Chapter 17</i> Penetrability (Wegsamkeit)	105
<i>Chapter 3</i> Inductive Versus Deductive Approach in the Interpretation of Textures	14	Part II: Consideration of Hypotheses and Theories on Metallogeny (Study Cases)	
<i>Chapter 4</i> Mantle and Lower Crust Derivatives	17	<i>Chapter 18</i> Global Tectonics and Metallogeny	107
<i>Chapter 5</i> Replacement Patterns and Processes	23	<i>Chapter 19</i> Differentiation and Metallogeny	111
<i>Chapter 6</i> Replacement Versus Ex-Solutions	41	<i>Chapter 20</i> Metallogeny Related to Ultrabasics	114
<i>Chapter 7</i> Symplectites	52	<i>Chapter 21</i> Granites/Pegmatites and Related Metallogeny	118
<i>Chapter 8</i> Crystalloblastesis	64	<i>Chapter 22</i> Granitization – Anatexis	123
<i>Chapter 9</i> Zonal Growths	68	<i>Chapter 23</i> Metallogeny Related to Granodiorites- Monzonites	126
<i>Chapter 10</i> Epitaxis – Epitactic Growths	71	<i>Chapter 24</i> Metallogeny Related to Porphyries	127
<i>Chapter 11</i> Inclusions	74	<i>Chapter 25</i> Skarns-Pyrometasomatic Metallogeny (and Superimposed Metallogeny)	129
<i>Chapter 12</i> Colloform Structures (Gel Structures)	77	<i>Chapter 26</i> Pneumatolytic to Hydrothermal-Hypothermal	139
<i>Chapter 13</i> Sphaeroidal Structures and Textures	85	<i>Chapter 27</i> Controversies – Various Aspects of Metallogeny	143

<i>Chapter 28</i> The Witwatersrand Controversy	157	<i>Chapter 44</i> Redistribution – Mobilization – Remobilization	211
<i>Chapter 29</i> The Broken Hill Controversy	159	<i>Chapter 45</i> Zonal Distribution of Elements and Minerals	213
<i>Chapter 30</i> Mount Isa Controversy	161	<i>Chapter 46</i> Source and Recipient Geoenvironments of Mineralization	215
<i>Chapter 31</i> The Role of Brines in Metallogeny (The Tennessee Valley-Type of Deposits)	163	Part III: On the Distribution of Elements and Ore Parageneses. The Empirical Laws of Element Segregation-Concentration in Ores	
<i>Chapter 32</i> The Role of Brines and the Mixed Fluids Hypothesis	165	<i>Chapter 47</i> The Empirical "Laws" of Element Segregation/Crystallochemistry/Isotope Chemistry Versus Genesis of Ores – State of the Art	219
<i>Chapter 33</i> Lateral Segregation Processes	167	<i>Chapter 48</i> Segregation of Elements in Accordance with Their Interrelationships to Form Mineral Association-Parageneses	221
<i>Chapter 34</i> Volcanogenic (Volcano-Sedimentary) Deposits	169	<i>Chapter 49</i> Common (Joint) Segregation of Elements	225
<i>Chapter 35</i> Consideration of Certain Aspects of Banded Iron Formations (BIFs) with Emphasis on Pre-cambrian BIFs	173	<i>Chapter 50</i> Hydrothermal and Pegmatitic Element Segregation to Form U-Parageneses	230
<i>Chapter 36</i> Fluid Inclusions	180	<i>Chapter 51</i> Superimposed Paragenesis (Element Segregation/Distribution Processes)	237
<i>Chapter 37</i> Some Aspects of the Role of Fluids in Metamorphogenic Ores	183	<i>Chapter 52</i> Ti, V, Cr – Their Interrelationships and Antipathies	239
<i>Chapter 38</i> Sulphur in Metallogeny	188	<i>Chapter 53</i> The Te, Se, Bi, Au, Ag Element Segregation/Distribution (in Paragenetic Associations)	242
<i>Chapter 39</i> Study Cases of Isotopes and Their Significance in Metallogeny	191	<i>Chapter 54</i> Realgar, Orpiment – Cinnabar – Metacinnabar Parageneses	244
<i>Chapter 40</i> Mass-Replacement of Rocks by Ores and Palaeo-Karst-Type Deposits	195	<i>Chapter 55</i> A Special Case of Non-Ferrous Metal Mineralization in Evaporites	246
<i>Chapter 41</i> Hypogene, Supergene and Oxidation Mineralizations	199	<i>Chapter 56</i> The Segregation (Distribution) of Sn, Mo and W to Form Concentrations or Ore Deposits	247
<i>Chapter 42</i> Some Aspects of Manganese Mineral Formation - Transformation - Alteration - Oxidation and in General Mn-Mobilization/Remobilization	204	<i>Chapter 57</i> Special Cases of Element Segregation/Distribution	251
<i>Chapter 43</i> The Significance of Leaching and Diffusion Processes in Ore Formation	208		

<i>Chapter 58</i> Element Segregation/Distribution in the Manganese Parageneses.	255	<i>Chapter 62</i> Geoenvironment – Mobilization – Remobiliza- tion (Redistribution of Elements)	267
<i>Chapter 59</i> Trace Elements in Sulfides (Compatible with a Joint Segregation of Elements in Accordance with the Empirical "Laws" of Element Inter- relations)	258	<i>Chapter 63</i> Conclusions of Part III	273
<i>Chapter 60</i> Study Cases of Agents of Metal Transportation	260	Illustrations	275
<i>Chapter 61</i> Goldschmidt's 'Laws of Element Distribution' and the Empirical "Laws" of Interrelated Element Segregation (Metallic Element Concentration)	262	References	589
		Author Index	617
		Subject Index to the Text Part	625
		Subject Index to the Illustrations	654