

**CONTENTS**

**SECTION I : RECOVERY OF CHROMIUM FROM ITS ORES**

16. Recovery of Chromium from its Ores	3
17. European Methods for Production of Ferrochromium	34
18. Electrowinning of Chromium: Chromic Acid Electrolyte	43
19. Electrowinning of Chromium from Chromium-Alum Electrolytes	51
20. Electroplating of Chromium	65
21. Deposition of Chromium by Methods other than Electrolysis	93

**SECTION II : PHYSICAL PROPERTIES OF CHROMIUM, ITS ALLOYS AND  
METALLURGICAL USE**

22. The Physical and Chemical Properties of Chromium	101
23. Ductile Chromium	148
24. Chromium in Austenitic Steels	159
25. Chromium in Ferritic Steels	207
26. Chromium in Cast Iron	242
27. Chromium in High Temperature Alloys	266
28. Chromium in Nickel-Base Alloys	279
29. Chromium in Electrical-Resistance Alloys	291
30. Chromium in Cobalt-Base Alloys	304
31. Chromium in Aluminum Alloys	310
32. Chromium in Copper Alloys	315
33. Chromium in Titanium-Base Alloys	319

**SECTION III : CHROMIUM IN REFRACTORIES**

34. Chromium in Refractories	327
Subject Index	391