## Contents

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter I</td>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>Chapter II</td>
<td>Synthesis and spectroscopic studies of 2,2'-dipyridylamine La(III), Ce(III), Pr(III), Th(IV), UO₂(VI) and peroxo derivative of UO₂(VI)</td>
<td>39</td>
</tr>
<tr>
<td>Chapter III</td>
<td>Synthesis and spectroscopic investigation of uranium(VI) complexes of pyrimidine and pyridine Schiff bases and their peroxo derivatives</td>
<td>68</td>
</tr>
<tr>
<td>Chapter IV</td>
<td>Dioxouranium-Sulfur System : Synthesis, spectral studies and peroxo derivatives of UO₂(N,S)/UO₂(O,N,S) complexes</td>
<td>86</td>
</tr>
<tr>
<td>Chapter V</td>
<td>Synthesis and characterisation of mixed ligand complexes of UO₂(L-L)₂ (L-L =acac, bzac, ox) and heterocyclic bases.</td>
<td>120</td>
</tr>
<tr>
<td>Chapter VI</td>
<td>Cobalt complexes of O,N,O chelators: Synthesis, spectral and electrochemical studies</td>
<td>135</td>
</tr>
<tr>
<td>Chapter VII</td>
<td>Chemistry of azoimidazoles : synthesis and spectral characterisation of Pb(II), Ag(I), Pd(II) and UO₂(VI)-azoimidazoles complexes</td>
<td>170</td>
</tr>
<tr>
<td>Chapter VIII</td>
<td>Synthesis, characterisation and properties of a new chelating resin containing imidazolylazo group, and its analytical applications</td>
<td>192</td>
</tr>
<tr>
<td>Appendix I</td>
<td>Table VIII.1</td>
<td>230</td>
</tr>
<tr>
<td>Appendix II</td>
<td>Publications</td>
<td>234</td>
</tr>
</tbody>
</table>