# Book Section

## CHEMISTRY OF THE PLATINUM GROUP METALS: RECENT DEVELOLPMENTS

**(STUDIES IN INORGANIC CHEMISTRY - VOLUME II);**

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Platinum group of metals occupy a special place in periodic table because of their unique catalytic properties. They are widely used in chemical plants, petrochemical industries and recently as autocatalysts for pollution control. Though, in past twenty years, many books have been published on chemistry, organo metallic, coordination chemistry and various other aspects of platinum group metals, the phenomenal progress made in recent times with regard to chemistry and applications of these six platinum group metals viz platinum, palladium, rhodium, Indium, ruthenium and osmium - has necessiated a volume to cover these recent developments. The present volume serves this purpose.

The book contains 17 chapters and the material covered falls into three broad areas. Firstly, the occurrence, extration and use of the metals - especially in catalysis, electrochemistry, energy and electronics. Secondly, organometallic and homogeneous catalytic chemistry. The other important area is the coordination chemistry including biochemistry and cancer therapy.

The title of the chapters are: (1) The occurrence, extraction, properties and uses of the platinum group metals; (2) General Introduction to catalysis by platinum group metals; (3) Catalytic combustion; (4) Platinum group metal catalysts in the synthesis of chemicals from synthesis gas; (5) Recent developments in platinum group metal catalysts in the petrochemical industries; (6) Platinum group catalysis in melts; (7) C-H Bond activation; (8) Oxidation; (9) Recent Advances in the chemistry of platinum group carbonyls in catalysis; (10) Electrochemical applications of platinum group metal coated anodes; (11) Platinum group metals in the photo decomposition of water; (12) Organo-metallic and homogeneous catalytic chemistry of palladium and platinum; (13) Organometallic and homogeneous catalytic chemistry of rhodium and iridium; (14) Recent developments in the chemistry of the platinum metals in high oxidation states; (15) Amino acid and peptide complexes of platinum group metals; (16) Cancer therapy using platinum group metals and (17) Platinum group metals in electronics.

Individual chapters have been written by experts in the field and authoritative. Each chapter ends with very useful extensive list of references and contain good number of figures and tables. The chapters are easily readable and are well written. The book has excellent get-up. It serves as a valuable guide and information source to all those Scientists and Technologists in universities, academic institutions and in industries, who are working with pure and applied aspects of these metals. This valuable reference book should find a place in all good scientific and technical libraries.

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