

CONTENTS

Preface	ix
1. The Chemical Characteristics of Victorian Brown coal	3
2. Correlations Between Petrographical Properties, chemical structure, and Technological Behavior of Rhenish Brown coal	15
3. The Structure and Reactions of Northern Great plains lignites	39
4. Resources, Properties, and Utilization of Texas Lignite	53
5. Small-Angle X-Ray Scattering of the Submicroscopic Porosity of Some Low-Rank Coal	79
6. Determination of the Microstructure of Wet and Dry Brown Coal	95
7. Chemical Variation as a Function of Lithotype and depth in Victorian brown coal	109
8. Some Structural Features of a Wilcox lignite	133
9. Comparison of Hydrocarbons Extracted from Seven Coals by Capillary gas Chromatography and Gas chromatography-Mass Spectrometry	145
10. Analysis of the Inorganic Constituents in Low-Rank coal	159
11. Geochemical Variation of Inorganic Constituents in a North Dakota lignite	175
12. Measurement and Prediction of Low-Rank Coal Slag Viscosity	195
13. Role of Exchangeable Cations in the Rapid pyrolysis of lignites	213
14. Low-Rank Coal Hydrolysis	227
15. Combustion Reactivity of Chars from Australian Subbituminous Coal	243
16. Cationic Effects During Lignite Pyrolysis and Combustion	255
17. Catalysis of Lignite Char Gasification by Exchangeable Calcium	267
18. Mechanistic Studies on the Hydroliquefaction of Victorian Brown coal	275
19. Structure and Liquefaction Reactions of Texas Lignite	287
Author Index	305
Subject Index	305