

## CONTENTS

Preface	ix
1. Mineral Matter and Trace Elements in Coal	1
2. Trace Impurities in Coal by Wet Chemical methods	23
3. Trace Elements in Coal by Optical Emission Spectroscopy	35
4. Trace Elements in coal Dust by Spark-spark-Source Mass Spectrometry	48
5. Major and Minor Constituents in Siliceous Materials by Atomic Absorption spectroscopy	57
6. X-Ray Fluorescence Analysis of Whole coal	66
7. Trace Impurities in fuels by Isotope Dilution Mass Spectrometry	74
8. Trace Elements in Coal by Neutron Activation Analysis with Radiochemical Separations	84
9. Trace Elements by Instrumental Neutron Activation Analysis Pollution Monitoring	98
10. Major,Minor, and Trace Element Composition of Coal and Fly Ash, as Determined by Instrumental Neutron Activation Analysis	118
11. The Fate of Some Trace Elements during Coal Pretreatment and Combustion	139
12. Total Mercury mass Balance at a Coal-Fired Power Plant	154
13. Trace Element Mass Balance Around a Coal-Fired Steam Plant	175
14. Major,Minor, and Trace Elements in the Liquid Product and solid Residue from Catalytic Hydrogenation of coal	188
15. Trace Element Emissions: Aspects of Environmental Toxicology	192
Index	211