

## **About the Book**

*This book covers three widely different topics waste management, petroleum and nanoclays all interrelated and deserving through study of clay science for their understanding. Various methods of waste recycling and their utilization is one of the most salient features of this book. Thus the book is likely to be useful both for academic and corporate world.*

*The role of clays to identify the presence of petroleum is highlighted in this book. This is very effective for an understanding of petroleum geology. A comparative study between clay and nanoclay to discriminate one from another is presented in the volume. Thus the book is expected to be well accepted for clay, soil, agriculture and environmental science community.*

### **Contents:**

- 1. Clay formation, composition and inter structure with natural variation*
- 2. Clay-soil interaction with soil properties and its variation*
- 3. Basics of physical and chemical properties of clay*
- 4. Application of clays and soils in geotechnical engineering*
- 5. Classification of waste types with related source*
- 6. Waste collection, treatment and recycling methods*
- 7. Disposal methods of Toxic and Non-toxic waste using clays and nanoclays*
- 8. Global wastes in developed and developing countries and related guidelines*
- 9. Function of waste management in controlling sustainable environment*
- 10. Impact of special properties and environmental interactions of nanoclays and clays*
- 11. Nanoclays (Nutrients) in agricultural use*
- 12. Industrial applications of nanoclays composites*
- 13. Analytical techniques used for nanoclay study*
- 14. Diagenetic studies for basin analysis using clay mineralogy and dating*
- 15. Origin, formation and nature petroleum*
- 16. Implication of smectite-Illite transformation and petroleum exploration techniques*