DESCRIPTION

Basic theory, applications, and recent trends in analytical techniques used in crude oil and related products analysis

This book covers the application of different spectroscopic methods to characterize crude oil and related products. Its topics are presented in a pedagogical manner so that those new to the subject can better understand the content. The book begins by familiarizing the reader with the rheological characterization of crude oil and related products. Subsequent chapters are directed towards the current trends of different spectroscopic methods for the characterization of crude oil.

Analytical Characterization Methods for Crude Oil and Related Products features chapters on: optical interrogation of petroleum asphaltenes (myths and reality); ESR characterization of organic free radicals in petroleum products; high-field, pulsed, and double resonance studies of crude oils and their derivatives; NMR spectroscopy in bitumen characterization; applications of Raman spectroscopy in crude oil and bitumen characterization; and more.

- Uses a bottom-up approach—starting from the basic theory of the technique followed by its applications and recent trends in crude oil analysis
- Includes informative content so as to take a technician to the level of using a particular analytical method
- Covers relevany information so as to enable a manager in the industry to make purchasing decisions
Analytical Characterization Methods for Crude Oil and Related Products is aimed at researchers in academia as well as technicians and developers of new analytical methods in the oil industry and related areas. It will also be of interest to professionals, scientists, and graduate students in analytical sciences dealing with oil and environmental analysis.

ABOUT THE AUTHOR

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