

CHALLENGES OF NMR SPECTROSCOPY IN CRUDE OIL AND ALTERNATIVE FUELS ANALYSIS

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An understanding of crude oil and alternative fuels composition is of utmost importance in research and development of production processes, in production control and in product quality assessment.^[1-4] In this talk challenges and possibility of NMR spectroscopy in analysis of different mineral samples will be demonstrated. It will be shown that NMR spectroscopy coupled with statistical methods is a valuable tool for the investigation of physicochemical properties and aggregation of asphaltenes, most complex and polar oil components which cause different problems in oil industry.^[1,2]

Recently, the need to develop alternative fuels has become essential for reducing the impact of global warming and climate changes on the planet as well as the limited resources of crude oil and natural gas. Some distinctive examples of using NMR to study renewable fuels will be discussed.^[3,4]

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