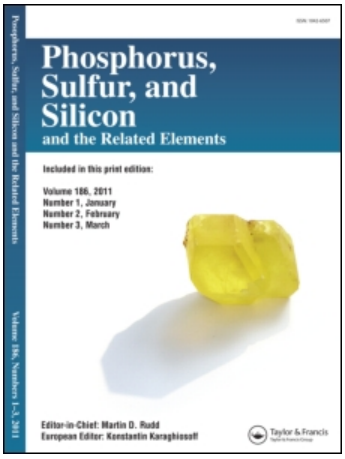

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STUDIES OF MECHANISM OF 2-METHYLTHIOPHENE AND THIOPHENE FORMATION FROM N-PENTANE AND HYDROGEN SULPHIDE USING ^{14}C

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STUDIES OF MECHANISM OF 2-METHYLTHIOPHENE AND THIOPHENE FORMATION FROM n-PENTANE AND HYDROGEN SULPHIDE USING ^{14}C

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The mechanism of 2-methylthiophene formation from n-pentane and hydrogen sulphide over Cr-containing oxide catalyst is studied by using the Kinetic-Isotope method. The experiments were carried out in pulse system in He as a carrier gas (535° and 3 atm.) using ^{14}C-labelled pentene and n-pentane. The reaction products were analyzed by radiochromatography. It is shown the 2-methylthiophene formation from n-pentane and hydrogen sulphide proceeds largely via consecutive dehydrogenation of n-pentane to pentenes, pentadiene followed by interaction with hydrogen sulphide. Thiophene is largely as s result of C_4-hydrocarbon interaction with hydrogen sulphide. A general scheme of the mechanism of 2-methylthiophene and thiophene formation is suggested.