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Concentration of paramagnetic centres at low-temperature thermal destruction of asphaltenes of heavy petroleum distillates

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Abstract

© Kazan Federal University (KFU). Changes of paramagnetic centers (PC) concentration in dispersed petroleum systems were studied in the process of low-temperature thermolysis. The kinetic model of PC concentration dynamics based on the processes of unpaired electrons formation during singlet-triplet transitions, weak chemical bonds dissociation and recombination of free radicals is proposed. PACS: 75.20.-g, 96.20.Dt, 02.30.Hq

Keywords

Asphalt, Asphaltene, EPR, ESR, Paramagnetic centers, Petroleum disperse system, Temperature dependence