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塔里木盆地熟化有机质成烃动力学模型原始参数的恢复及意义

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摘要：

针对塔里木盆地主力源岩层大多埋深较大、成熟度较高，对这些源岩所进行的模拟实验不能反映或描述样品在达到现今埋深这前所经历的成烃演化过程的难题，本文先由模拟实验数据出发，建立和标定各样品的化学动力模型，在此基础上，推导和建立了恢复化学动力的始参数的方法并利用塔里木盆地的样品进行了应用。结果表明，深埋样品有机质中有相当部分的低活化能组分已在其前期演化过程中被成烃反应所消耗。因此，要客观描述样品的全部成烃

关键词：塔里木盆地 动力学模型参数 熟化有机质 成烃

Restoration of the Original Parameters of the Chemical Kinetic Models for Generation of Hydrocarbons from Mature Organic Matter in the Tarim Basin and Its Significance

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Abstract:

Simulation experiments carried out with the source rock samples from the Tarim Basin fail to reflect or describe the hydrocarbon generation processes which these samples experienced before they reached the present buried depths due to relatively large buried depths and high maturity of most main source rocks. In consideration of this tough problem the principle and method for restoring the original parameters of chemical kinetic models for the samples studied are derived and constructed based on the chemical kinetic models calibrated with the data of thermal simulation experiments. The results indicate that quite a number of components with low activation energy in organic matter of deeply buried samples have been consumed by the reactions of hydrocarbon generation during the earlier evolution process. Therefore, it is necessary to recover the consumed parts so as to describe objectively the whole process and amount of generated hydrocarbon.

Keywords:Tarim Basin chemical kinetics restoration of original parameters of chemical models

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