



张丽萍, 苏现波, 曾荣树. 煤体性质对煤吸附容量的控制作用探讨[J]. 地质学报, 2006, 80(6): 910-915

煤体性质对煤吸附容量的控制作用探讨 [点此下载全文](#)

[张丽萍](#) [苏现波](#) [曾荣树](#)

中国科学院地质与地球物理研究所, 中国科学院矿产资源研究重点实验室 北京, 100029, 河南理工大学资源环境学院, 中国科学院地质与地球物理研究所, 中国科学院矿产资源研究重点实验室, 北京, 100029, 北京, 100029, 焦作, 454000, 北京, 100029

基金项目: 国家“973”项目(编号2002CB211705)资助成果。

DOI:

摘要点击次数: 135

全文下载次数: 126

摘要:

煤体性质是影响煤吸附容量的重要因素之一。通过对中国华北和西北两个重要煤层气富集区煤的煤岩学、煤化学和等温吸附实验分析,从煤级、显微组分、煤体变形三个方面对煤的吸附容量及其控制因素进行了分析探讨。结果表明,水分平衡条件下煤的吸附容量与煤阶的关系为倒U字型,吸附容量随煤阶的变化为跃变式,基本与四次煤化作用跃变阶段相对应,主要受控于煤化作用过程中煤的亲甲烷能力和孔隙度的变化;煤体中惰质组含量较高时,其对煤体的吸附容量的影响较为明显,主要与惰质组中丝质体的高吸附能力有关;在构造应力作用下,煤体表面物化发生的变化使构造煤吸附容量比同一矿区同一煤层原生结构煤高。

关键词: [煤层气](#) [吸附容量](#) [煤化作用跃变](#) [显微组分](#) [煤体变形](#)

Discussion on the Controlling Effects of Coal Properties on Coal Adsorption Capacity [Download Fulltext](#)

ZHANG Liping, SU Xianbo, ZENG Rongshu Institute of Geology and Geophysics, CAS, Beijing, 100029 Institute of Resources and Environment, Henan Polytechnic University, Jiaozuo, Henan, 454000 Key Laboratory of Mineral Resources, Institute of Geology and Geophysics, CAS

Fund Project:

Abstract:

Coal properties are one of the three main important affecting factors on coal adsorption capacity. In this paper, coal samples from Northern and Northwestern China, where coalbed methane resources are very rich, were analyzed in petrology, chemistry and isotherm adsorption. Then the influence of coal rank, maceral and coal deformation on coal adsorption capacity were discussed. The results indicate that the relationship between coal adsorption capacity and coal rank appeared a reversed U-shaped trend in the condition of water equilibrium. Coal adsorption capacity changed abruptly during coalification corresponding to four coalification jumps, which was controlled by CH<sub>4</sub> affinity and porosity changes of coal during coalification. The adsorption capacity effect of inertinite was clear when its concentration was high, which was mainly related to high adsorption capacity of fusinite in inertinite. Surface physicochemical changes caused by tectonic stress was a main reason for deformed coal to possess the strongest adsorption capacity than other normal coal from the same mine and the same coal seam.

Keywords: [coalbed methane](#) [adsorption capacity](#) [coalification jump](#) [maceral](#) [coal deformation](#)

[查看全文](#) [查看/发表评论](#) [下载PDF阅读器](#)

您是第**582186**位访问者 版权所有《地质学报(中文版)》  
地址: 北京阜成门外百万庄26号 邮编: 100037 电话: 010-68312410 传真: 010-68995305  
本系统由北京勤云科技发展有限公司设计

