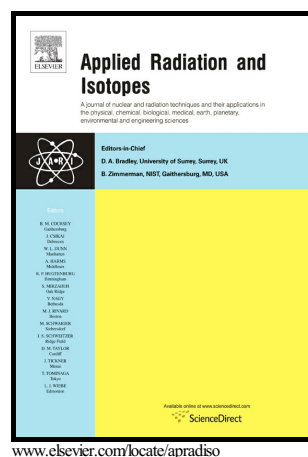


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The temperature dependence of adsorption coefficients of ^{222}Rn on activated charcoal: an experimental study

Lu Guo^a, Yunxiang Wang^a, Lei Zhang^{a,b*}, Zhi Zeng^c, Wenbin Dong^d, Qiuju Guo^a

^a *State Key Laboratory of Nuclear Physics and Technology, School of Physics, Peking University, Beijing 100871, China*

^b *State Key Laboratory of NBC Protection for Civilian, Beijing 102205, China*

^c *Key Laboratory of Particle and Radiation Imaging, Department of Engineer Physics, Tsinghua University, Beijing 100084, China*

^d *Dalian Naval Academy, Dalian 116018, China*

*Corresponding author. swofely@pku.edu.cn

Abstract

The radon adsorption coefficient of activated charcoal (K) has exponential relationship with temperature theoretically, but few experiment results of K at temperature below 0 °C were given. In this study, K were measured using a flow-through system with activated charcoal in cylindrical adsorption beds at temperature adjusted from room temperature to -48°C using liquid nitrogen. Results are consistent with theory and show that the adsorption coefficient at -48 °C is nearly 25 times higher than that at 23°C.

activated charcoal; radon; adsorption coefficient; temperature dependence

1. Introduction

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