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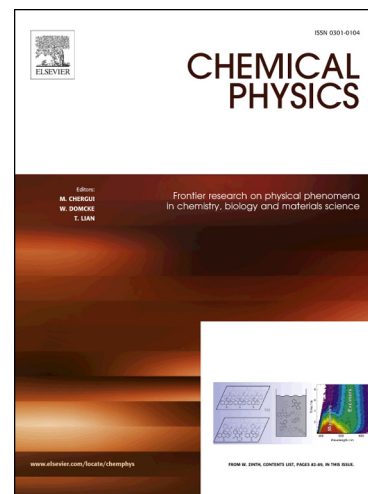
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Relationship between the anomalous diffusion and the fractal dimension of the environment

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**Abstract.** In this letter, we provide an experimental study highlighting a relation between the anomalous diffusion and the fractal dimension of the environment using the methanol anomalous transport through the porous solid pellets with various pores geometries and different chemical compositions. The anomalous diffusion exponent was derived from the non-integer order of the time-fractional diffusion equation that describes the methanol anomalous transport through the solid media. The surface fractal dimension was estimated from the nitrogen adsorption isotherms using the Frenkel-Halsey-Hill method. Our study shows that decreasing the fractal dimension leads to increasing the anomalous diffusion exponent, whereas the anomalous diffusion constant is independent on the fractal dimension. We show that the obtained results are in a good agreement with the anomalous diffusion model on a fractal mesh.

**Keywords:** anomalous diffusion, fractals, fractal dimension, porous media

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