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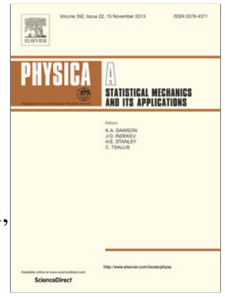

A time fractional convection–diffusion equation to model gas transport through heterogeneous soil and gas reservoirs

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Highlights

1. Time fCDE model can efficiently describe the positively skewed BTCs for gas transport in soil or gas reservoirs.

2. The fractional index is the key parameter to determine the heavy-tailed decay of gas concentration at late time period.

3. Numerical solutions of the fCDE model are explored systematically.