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# Existence and uniqueness of solutions to the stochastic porous media equations of saturated flows

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# Existence and uniqueness of solutions to the stochastic porous media equations of saturated flows

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**Abstract**

This paper proves the existence and uniqueness of nonnegative solutions for the stochastic porous media equations with multiplicative noise, infinite jump and discontinuous diffusivity function relevant in description of saturation processes in underground water infiltration in a bounded domain of $\mathbb{R}^3$.

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