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Joe P. Chen* (joe.p.chen@uconn.edu), Department of Mathematics, University of Connecticut, Storrs, CT 06269-3009, **Stanislav A. Molchanov** (smolchan@uncc.edu), Department of Mathematics, University of North Carolina at Charlotte, Charlotte, NC 28223, and **Alexander Teplyaev** (alexander.teplyaev@uconn.edu), Department of Mathematics, University of Connecticut, Storrs, CT 06269-3009. *Spectral dimension and Bohr's formula for Schrodinger operators on unbounded fractal spaces.*

We establish a sharp asymptotic formula for the eigenvalue counting function of the Schrodinger operator $-\Delta + V$ for unbounded potentials V on several types of unbounded fractal spaces. Such an asymptotic formula is often attributed to Niels Bohr in the Euclidean setting. We identify a set of sufficient conditions for Bohr's formula to hold on metric measure spaces which admit a cellular decomposition, and then verify these conditions for fractafolds and fractal fields based on nested fractals. In particular, we are able to answer a question of Fan, Khandker, and Strichartz regarding the spectral asymptotics of the harmonic oscillator potential on the infinite blow-up of a Sierpinski gasket. (Received January 19, 2015)