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Kasso A Okoudjou* (kasso@math.umd.edu), Deapartment of Mathematics, University of Maryland, College Park, MD 20742, and Robert S Strichartz (str@math.cornell.edu), Department of Mathematics, Malott Hall, Cornell University, Ithaca, NY 14853. Asymptotics of eigenvalue clusters for Schrödinger operators on the Sierpinski gasket.

We study the asymptotic behavior of spectra of Schrödinger operators with continuous potential on the Sierpiński gasket SG. In particular, using the existence of localized eigenfunctions for the Laplacian on SG we show that the eigenvalues of the Schrödinger operator break into clusters around certain eigenvalues of the Laplacian. Moreover, we prove that the characteristic measure of these clusters converges to a measure. (Received August 18, 2006)