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David Kerr* (kerr@math.tamu.edu), Department of Mathematics, Texas A&M University, College Station, TX 77843-3368, and **Hanfeng Li** (hfli@math.buffalo.edu), Department of Mathematics, SUNY at Buffalo, Buffalo, NY 14260-2900. *Entropy and the variational principle for actions of sofic groups.*

Recently Lewis Bowen introduced a notion of entropy for measure-preserving actions of a countable sofic group on a standard probability space admitting a generating partition with finite entropy. Using an operator algebra perspective we develop a more general approach to sofic entropy which produces both measure and topological dynamical invariants, and we establish the variational principle in this context. (Received August 18, 2010)