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Guotai Deng (hilltower@163.com), School of Mathematics and Statistics, Central China Normal University, Wuhan, Hubei 430079, Peoples Rep of China, Chuntai Liu (1ct984@163.com), School of Mathematics and Computer Science, Wuhan Polytechnic University, Wuhan, Hubei 430023, Peoples Rep of China, and Sze-Man Ngai* (smngai@georgiasouthern.edu), Department of Mathematical Sciences, Georgia Southern University, Statesboro, GA 30460-8093. Topological properties of a class of self-affine tiles in \mathbb{R}^3 .

We construct a class of connected self-affine tiles in \mathbb{R}^3 and prove that it contains a subclass of tiles that are homeomorphic to the unit ball. Our construction is obtained by generalizing a two-dimensional one by Q. Deng and K.-S. Lau. (Received January 16, 2015)