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Strongly self-absorbing C-algebras and Fraïssé limits*

A unital separable C*-algebra (other than the C*-algebra of all complex numbers) is strongly self-absorbing if it is isomorphic to its (minimal) tensor product with itself, in a "strong" sense. Strongly self-absorbing C*-algebras play a crucial role in Elliott's classification program of separable nuclear C*-algebras by K-theoretic data. Among them, the Jiang- Su algebra $\mathcal{Z}$ has a special place and, to this date, the classification of separable, simple, unital, nuclear C*-algebras that tensorially absorb $\mathcal{Z}$ and satisfy the UCT has been the most remarkable achievement of the classification program. In their original paper from 1999, Jiang and Su already proved that $\mathcal{Z}$ is strongly self-absorbing. However, their proof uses heavy results and machinery from the classification, such as KK-theory. I will outline an easier proof of the fact that $\mathcal{Z}$ is strongly self-absorbing which does not depend on any classification results, via establishing a general connection between the strongly self-absorbing C*-algebras and the "Fraïssé limits" of categories of C*-algebras that are sufficiently closed under tensor products. It was previously known that $\mathcal{Z}$ can be realized as the Fraïssé limit of the category of its building blocks and unital trace-preserving embeddings.