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Decomposition of Topological Azumaya Algebras

A topological Azumaya algebra of degree n over a CW-complex X is a bundle of complex algebras over X that is locally isomorphic to the matrix algebra $M_n(\mathbb{C})$. The tensor product of \mathbb{C} -algebras can be extended to topological Azumaya algebras by performing the operation fiberwise. We give conditions for positive integers m and n and the space X such that a topological Azumaya algebra of degree mn can be decomposed as the tensor product of Azumaya algebras of degrees m and n .