Combinatorics of Words and Semigroup Algebras Which Are Sums of Locally Nilpotent Subalgebras

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Abstract. We construct new examples of non-nil algebras with any number of generators, which are direct sums of two locally nilpotent subalgebras. Like all previously known examples, our examples are contracted semigroup algebras and the underlying semigroups are unions of locally nilpotent sub-semigroups. In our constructions we make more transparent than in the past the close relationship between the considered problem and combinatorics of words.