On left univocal factorizations of semigroups

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Following Tolo [9], a semigroup S is said to be *factorizable* if it can be written as the set product AB of proper subsemigroups A and B. In this case, we call the pair (A, B) a *factorization* of S, with factors A and B. As in Catino [1], a factorization (A, B) of a semigroup S is called *left univocal* if $ab = a'b'$ implies $a = a'$, for all $a, a' \in A$ and $b, b' \in B$. There are several papers on this subject, for istance see [1–8].

The main aim of the paper is to construct a semigroup S from a given semigroups A and B in such a way that (A, B) is a left univocal factorization of S where $A \cap B$ consists of only one element, that is right identity of A and left identity of B. The construction obtained generalizes those of Köhler [Theorem 2.1, [3]], of Krishnan [Theorem 3, [4]] on monoids and of Catino [Theorem 5, [1]] on univocal factorizations.

Details of the work can found in Ref. [10]

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