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Casey Donovan* (cdonoven@binghamton.edu) and **Luise-Charlotte Kappe**
(menger@math.binghamton.edu). *Finite coverings of algebraic structures II.*

The covering number of a semigroup S with respect to semigroups, $\sigma_s(S)$, is the minimum number of proper subsemigroups of S whose union is S . We have a complete characterization of covering numbers of finite semigroups. When S is a finite semigroup that is neither a group nor generated by a single element, $\sigma_s(S) = 2$; when S is a finite group, the covering number of S with respect to semigroups is equal to the covering number with respect to groups. The case of infinite semigroups is largely unsolved outside of specific cases. One worth highlighting is the following: for an infinite group G , $\sigma_s(G) = 2$ if and only if G has a non-trivial left-orderable quotient. (Received August 09, 2019)