Nathanson, M. B.
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Summary: The set $A$ is an asymptotic nonbasis of order $h$ for an additive abelian semigroup $X$ if there are infinitely many elements of $X$ not in the $h$-fold sumset $hA$. For all $h \geq 2$, this paper constructs new classes of asymptotic nonbases of order $h$ for $\mathbb{Z}$ and for $\mathbb{N}_0$ that are not subsets of maximal asymptotic nonbases.

MSC:
11B13 Additive bases, including sumsets
11B05 Density, gaps, topology
11B34 Representation functions
11B75 Other combinatorial number theory
11A07 Congruences; primitive roots; residue systems

Keywords:
asymptotic basis; asymptotic nonbasis; maximal asymptotic nonbasis; additive number theory

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