Semi-clean group rings.

We call the commutative ring $R$ a clean ring if every element of $R$ can be written as the sum of a unit and an idempotent. The notion of a clean ring was defined by Nicholson [1977] in a study of exchange rings and lifting idempotents. Ye [2003] introduced the notion of semi-clean rings: $R$ is called a semi-clean ring if every element of $R$ can be written as the sum of a unit and a periodic element, where $r \in R$ is called periodic if there are natural numbers $k < n$ such that $r^k = r^n$. In joint work with Alan Loper, Warren McGovern, and Matthew Toeniskoetter, we show that, if $R$ is a local ring and $G$ is a torsion abelian group, then the group ring $R[G]$ is semi-clean. (Received September 04, 2020)