998-13-161   **Ian M Aberbach**, Department of Mathematics, University of Missouri, Columbia, MO 65211, and **Florian Enescu*** (`enescu@math.utah.edu`), Department of Mathematics, University of Utah, Salt Lake City, UT 84112. *The structure of F-pure rings.*

For a reduced F-finite ring R of characteristic $p > 0$ and $q = p^e$ one can write $R^{1/q} = R^{a_q} \oplus M_q$, where M_q has no free direct summands over R. We investigate the structure of F-finite, F-pure rings R by studying how the numbers a_q grow with respect to q. This growth is quantified by the splitting dimension and the splitting ratios of R which we study in detail. We also prove the existence of a special prime ideal $P(R)$ of R, called the splitting prime, that has the property that $R/P(R)$ is strongly F-regular. We show that this ideal captures significant information with regard to the F-purity of R.

1