S-pure projective and *S*-pure injective modules

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Let *S* be a class of left *R*-modules. The concept of *S*-purity was introduced by Warfield in 1969 which has a substantial role in module theory and also in model theory. Warfield proved that every *S*-pure projective module is a direct summand of a direct sum of elements of *S*. In this talk, first we discuss about the rings over which every *S*-pure projective module is a direct sum of elements of *S*. In fact, it is a variant of the classical problem of studying the rings over which every projective module is free. Then, we consider rings for which each direct sum of *S*-pure injective modules is *S*-pure injective.