

# Descending chains of coprime pairs

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## **Abstract**

Two elements  $a, b$  in a ring  $R$  form a right coprime pair, if  $aR + bR = R$ . Right coprime pairs have shown to be quite useful in the study of left cotorsion or exchange rings. In this paper, we define the class of strongly right exchange rings in terms of descending chains of them. We show that they are semiregular and that this class of rings contains left injective, left pure-injective, left cotorsion, local and left continuous rings. This allows us to give a unified study of all these classes of rings in terms of the behavior of descending chains of right coprime pairs.