Evolution of superconductivity and ferromagnetism in $Eu(Fe_{1-x}Ru_x)_2As_2$

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$EuFe_2As_2$ undergoes a collinear antiferromagnetic spin-density wave (SDW) transition at 190 K for the Fe sublattice and, an A-type antiferromagnetic ordering at 19 K for the Eu sublattice. By the substitution of Fe with Ru in $Eu(Fe_{1-x}Ru_x)_2As_2$ crystals, we found that the SDW transition is gradually suppressed, at the same time, superconductivity emerges with T_c ∼22 K. The magnetic ordering in the Eu sublattice changes from antiferromagnetic to ferromagnetic at x∼0.2, making the coexistence of superconductivity and ferromagnetism in a broad regime of $0.2 < x < 0.6$.