Charged Spin-Triplet Pairs in Sr_2RuO_4

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We will review the recent progress in the study of Sr_2RuO_4, arguably the best example in which the details of the spin-triplet superconductivity have been characterized. We place particular emphasis on the comparison between Sr_2RuO_4 and ^{3}He and describe an effort of probing the effects of the intrinsic angular momentum. We also discuss the superconducting properties in the $Sr_3Ru_2O_7$ part of the eutectic crystals consisting of Sr_2RuO_4 and a metamagnetic normal metal $Sr_3Ru_2O_7$. Its superconducting properties indicate the presence of small superconducting grains in the $Sr_3Ru_2O_7$ part connected by proximity network.

	Sr_2RuO_4 (F_1^s ~6, F_0^a ~ -0.5)	^{3}He (F_1^s =5~13, F_0^a ~ -0.7)
Spin and orbital states	Spin-triplet, odd parity (*p*-wave)	Spin-triplet, odd parity (*p*-wave)
under H = 0	A-phase (***d*** //c) on Q2D FS	A and B-phases on 3D FS
under H	H //c: A with rotated ***d*** (//ab) H //ab: New phase (with different orbital state?)	A_1 and A_2(A) with different spin states
Pairing mechanism	Coulomb repulsion beyond the spin fluctuations	Spin fluctuations (paramagnons) or higher-order effects (repulsion)?