

Abstract Submitted  
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**Odd-frequency superconductivity in superconducting strontium ruthenate** LUCIA KOMENDOVA, ANNICA BLACK-SCHAFFER, Uppsala University — We predict the existence of odd-frequency superconductivity in the strontium ruthenate  $\text{Sr}_2\text{RuO}_4$  superconductor, concentrated where its three bands are closest to each other in k-space. We investigate the effect in a realistic three-band model [1], as well as in a simplified two-band model [2], which both have been shown to lead to the appearance of a polar Kerr effect signal. In the two-band model it is also clear that the experimentally confirmed presence of the Kerr effect [3] guarantees the necessary condition for the appearance of the odd-frequency superconductivity, namely the presence of either single-particle hybridization between bands, and/or interband Cooper pairing. [1] M. Gradhand, K.I. Wysokinski, J.F. Annett, and B.L. Gyorffy, Phys. Rev. B 88, 094504 (2013). [2] E. Taylor and C. Kallin, Phys. Rev. Lett. 108, 157001 (2012). [3] J. Xia, Y. Maeno, P. T. Beyersdorf, M. M. Fejer, and A. Kapitulnik, Phys. Rev. Lett. 97, 167002 (2006).

Lucia Komendova  
Uppsala University

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