

Abstract Submitted
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The interplay between topological p-wave superconductivity and odd-frequency pairing in superconducting proximity systems¹ VALENTIN STANEV, VICTOR GALITSKI, Univ of Maryland-College Park — We study the proximity-induced superconductivity in semiconductor nanowires. The interplay between superconductivity and spin-orbit coupling plays a crucial role in proposals for creating Majorana fermions in semiconducting heterostructures. To further elucidate the physics of such devices we employ the quasiclassical Green's functions methods. We show that the spatial variations of the superconducting order parameter leads to non-trivial effects in the nanowire. We demonstrate the appearance of odd-frequency pairing correlations close to the boundaries, and discuss their effect on the density of states.

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