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Title:	Universality of Interfacial Superconductivity in Heavily Doped Silicon
Authors:	Mounand, Monika (/jspui/browse?type=author&value=Mounand%2C+Monika) Sirohi, Anshu (/jspui/browse?type=author&value=Sirohi%2C+Anshu) Sheet, Goutam (/jspui/browse?type=author&value=Sheet%2C+Goutam)
Keywords:	Spectroscopy Critical constants Silicon Magnetic properties Doping
Issue Date:	2021
Publisher:	ACS Publications
Citation:	ACS Applied Electronic Materials, 3(4), 1594–1600.
Abstract:	Silicon, the second most abundant element on earth, has been an ideal candidate for semiconductor industry. Recently, it was shown that a superconducting phase with a large critical temperature $T_c \sim 10$ K emerges locally under mesoscopic point contacts on silicon with non-superconducting metals. The superconducting phase can be realized on silicon crystals only above a threshold doping level. Here, we show that above the threshold level, the superconducting phase emerges for both electron and hole doping and the T_c remains insensitive to the type of carriers (electrons and holes). In addition, we also show that the superconducting phase can be realized on all accessible facets in commercially available silicon single crystals and tips of various elemental metals including ferromag
Description:	Only IISERM authors are available in the record
URI:	https://doi.org/10.1021/acsaelm.0c01097 (https://doi.org/10.1021/acsaelm.0c01097) http://hdl.handle.net/123456789/4720 (http://hdl.handle.net/123456789/4720)
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