Title:	The pressure- enhanced superconducting phase of Sr x –Bi 2 Se 3 probed by hard point contact spectroscopy.
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Abstract:	The superconducting systems emerging from topological insulators upon metal ion intercalation or application of high pressure are ideal for investigation of possible topological superconductivity. In this context, Sr-intercalated Bi2Se3 is specially interesting because it displays pressure induced re-entrant superconductivity where the high pressure phase shows almost two times higher Tc than the ambient superconducting phase (TC~2.9 K). Interestingly, unlike the ambient phase, the pressure-induced superconducting phase shows strong indication of unconventional superconductivity. However, since the pressure-induced phase remains inaccessible to spectroscopic techniques, the detailed study of the phase remained an unattained goal. Here we show that the high-pressure phase can be realized under a mesoscopic point contact, where transport spectroscopy can be used to probe the spectroscopic properties of the pressure-induced phase. We find that the point contact junctions on the high-pressure phase show unusual response to magnetic field supporting the possibility of unconventional superconductivity.
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