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**Pure Spin Current Injection through Superconductive/Normal Metal Ohmic Interface** KOHEI OHNISHI, ISSP University of Tokyo, TAKASHI KIMURA, YOSHICHIKA OTANI, ISSP University of Tokyo, ASI RIKEN — In past few years, spin-dependent transport properties in nano- structured systems have drawn considerable attention owing to potential applications in spintronics. Spin transport has so far been investigated both experimentally and theoretically much more intensively in normal- or semi-conductors than in superconductors. However recent theoretical studies on the spin transport in superconductor predict the intriguing phenomena such as the non-linearity and the control of superconductivity that may lead to functional superconductive spintronic devices. Therefore, it is urgent to elucidate experimentally the spin transports in superconductor. Here, we investigate the influence of pure spin currents on superconductivity in a lateral structure consisting of superconductive Nb, normal metal Cu and ferromagnetic Ni-Fe wires. Using nonlocal spin injection technique, we found that pure spin current injection into the superconductive Nb wire induces the voltage drop along the wire. This can be understood as conversion from the spin current to the supercurrent via the quasi-particle current.

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