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**Fermi-Liquid description of a system with a weak spin-orbit interaction: chiral-spin resonance and spin-Hall conductivity in the presence of the electron-electron interactions \***

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We demonstrate that similar to the Hall conductivity, which in the absence of the spin-orbit (SO) interaction is inherently related to the cyclotron resonance, the spin-Hall conductivity is related to a specific for SO system version of the electron-spin resonance. This resonance is due to the transitions between the electron states, which are split by the SO interaction, and is termed as the chiral spin resonance (CSR). It can be excited by the in-plane component of the electric field of the microwave radiation.

We discuss the Hall and spin-Hall conductivities following the lines of the Kohns theorem argumentation. Since in the presence of the SO interaction spin is not conserved, the electron-electron interaction renormalizes the spin-Hall conductivity as well as the frequency of the CSR. The effects of the electron interaction in systems with the SO interaction are analyzed both phenomenological and microscopically.

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*Keywords :*