## Semiconductor Spintronics

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The conventional microelectronics is based on the use of only two characteristics of electrons in semiconductor: their charge and their effective mass. It is commonly accepted now that the use of electronic spin as a new degree-of-freedom in semiconductor devices can offer new functionality and performance. A typical example of spintronics device is so called spin-transistor. In order to create such electronic device we should be able to inject, to detect and to manipulate the electronic spins in semiconductors by electrical means. All these problems are far from being completely resolved. In the paper we present a critical analysis of the present state and the perspectives of semiconductor spintronics.