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Sommario/riassunto	By exploiting the novel properties of quantum dots and nanoscale Aharonov-Bohm rings together with the electronic and magnetic properties of various semiconductor materials and graphene, researchers have conducted numerous theoretical and computational modeling studies and experimental tests that show promising behavior for spintronics applications. Spin polarization and spin-filtering capabilities and the ability to manipulate the electron spin state

through external magnetic or electric fields have demonstrated the promise of workable nanoscale devices for computing and memory applications.
