Bilayer graphene coherent states

Dennis Itzel Martínez Moreno Miguélez

Centro de Investigación y de Estudios Avanzados
(Cinvestav) del IPN de México

Abstract: In this talk we will consider the interaction of electrons in bilayer graphene with a constant homogeneous magnetic field which is perpendicular to the bilayer surface. This system can be addressed through an alternative semi-classical approach, the so-called coherent states which were first proposed by Erwin Schrödinger in 1926 for the harmonic oscillator as the quantum states closest to their classical counterpart. Thus, the bilayer graphene coherent states (BGCS) will be derived as eigenstates of an appropriate annihilation operator with complex eigenvalue. Some physical quantities can be computed for these states, in particular in order to study the dynamics of the system the time evolution will be explored and the time-correlation function will be computed.

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