Abstract Submitted
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The correct theory of the quantum Hall effect fractions KESHAV SHRIVASTAVA, University of Hyderabad — The effective charge,e*=(1/2)ge, obtained by introducing the symmetric g values, g=(2J+1)/(2L+1) with J given by L and S with both signs for S, and the Bohr magneton, used in the cyclotron frequency leads to factors of the type (1/2)g(n+1/2) in the eigen values which give the correct description of the modified Landau levels. The resistivity after introducing the flux quantization is modified by the effective charge which gives the plateaux. The helicity of every electron is defined by the sign of p.s where p is the linear momentum and s is the spin. Hence the +s particles move in the direction opposite to those of -s. The principal fractions, two-particle states and resonances explain most of the data. The remaining data is explained by the formation of electron clusters with spin different from 1/2. In this way all of the 101 or more fractions of the experimental data are correctly derived from the theory. The theory does not depend seriously on the dimensionality so it explains the graphite as well as the graphene.

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