Light Effects

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ABSTRACT: The idea has been presented that the Kerr effect supports the possibility of a nonlinearity of the electromagnetic field.
An electromagnetic wave has been presented as the plasma oscillation of the Dirac vacuum.

The Kerr effect (magneto-optic effect) consists in this that the polarization plane of the electromagnetic wave changes in the magnetic field after the medium reflection.

Here there is a natural nonlinearity of the fields: electromagnetic and constant magnetic. These fields interact mutually by some means or other.

It is necessary yet to explain the role of the medium reflection, but this effect doesn't appear without a constant magnetic field.

It may be proof of the existence of the magnetic monopoles with which the photons interact.

The plasma oscillation may exist in vacuum, especially because vacuum is a set of particles which can have positive or negative charge.

This effect is connected with the displacement of charge [1].

The electromagnetic wave is the plasma oscillation in the Dirac unempty vacuum.

Reference:

[1] Z. Morawski, "Unknown Consequences of Special Relativity", this website