



Solid State Institute
המכון למצב מוצק

TECHNION
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סמינר

Magnetic Field Effects in Organic Semiconductor Devices in High Magnetic Fields

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We report on magnetic field effects in organic light emitting diodes made of homopolymer active layers in magnetic fields up to 8 T. The measurements on bias driven devices include magneto-conductance and magneto-electroluminescence. We also studied magneto-photoconductance and magneto-photoluminescence in optically excited devices. In the very low magnetic field regime ($B < \sim 10$ mT) we find that the main mechanism responsible for the magneto-effects is the hyperfine interaction between the charge carriers and protons. The high field response is dominated by the anisotropic g-tensor and thermal spin polarization. We developed a simplified quantum mechanical approach taking into the above interactions in order to account for the experimental data.

ההרצאה תתקיים ביום רביעי, ה-6.9.17 בשעה 12:30

באודיטוריום המכון למצב מוצק, קומת כניסה

The lecture will take place on Wednesday, 6.9.17 at 12:30

at the Solid State Institute auditorium, entrance floor

M.Sc. student of Professor Eitan Ehrenfreund