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Quantization of the Poynting vector in a magnetic field KESHAV SHRIVASTAVA, University of Malaya — The flux quantization of the magnetic vector of the electromagnetic wave leads to the quantization of the Poynting vector. The electron-hole radiative interaction in a lattice leads to the formation of an electron-photon pair so that the electron moves along with the photon. The photon single-particle energy is flux quantized so that the flux quanta get attached to the electron. We find that e^2/hc^2 is also a fundamental constant just as h/e^2 is. Both the constants are in the dimensions of resistivity. [1] K. N. Shrivastava, AIP Conf. Proc.1017,47-56(2008); 1017, 422-428(2008); 1136, 469-473(2009); 1150, 59-67(2009); 1169, 48-54(2009).

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