

Polarisation in nature, science and technology in the visible and near infrared spectral range (Review Lecture)

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An overview is given about the polarization of visible and near infrared light in nature. An historical abstract of the discovery of polarized light is presented. The processes producing polarized light as well as its 'usage' in nature is shown. A short introduction will provide an inside, how polarization is treated in science by solving the radiative transfer equation. The focus is put here on remote sensing. The problems which arise due to polarization for remote sensing optical technology are pointed out. At the end an application of polarization measurements with POLDER/ADEOS from space to derive aerosol Characteristics is presented.