

Non-reciprocal optical element for photonic devices

This invention relates to fabrication technique for the creation of new optical elements, an asymmetric (non-reciprocal) diffraction grating and a passive nonlinear optical (visible, microwave, etc.) isolator (diode). It may have potential applications in the field of optical detection (spectrometers) and communications (circulators, wavelength division multiplexing circuits, etc.), etc.

One of applications of this proposal is the significant reduction of the noise level in optical communication systems on any other optical systems using laser sources. Another potential interest of these diodes is the fabrication of integrated laser gyroscopes for applications in aviation, etc.
