Technical Details

Scientists at UCF have developed a novel optical device for rotating the polarization of ultraviolet (UV), visible and infrared (IR) light. This device makes use of a twisted nematic liquid crystal sandwiched between an input window and a rotatable output window. Unlike current half waveplates, this can be used to continuously rotate polarized light at all wavelengths and through almost any angle. This method and technology is a drastic improvement over previous methods and could see use in IR, visible and UV spectroscopy for research and development, as well as an energy attenuator. Due to the low cost, wide field of view, wavelength independence and high efficiency this device will see widespread applicability.

Benefits

- Inexpensive, simple polarization rotator
- Works over an extremely wide range of wavelengths
- Functions independent of the angle of incident light

Applications

- Companies working with or manufacturing IR, fluorescence or absorbance instruments
- Polarizer, laser, and optics manufacturers

Technology #30503

- US Patent 6,476,966 B1

Inventors

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