

## Teaching Light Polarization by Putting Art and Physics Together

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**Abstract :** Light Polarization has many technological applications, and its discovery was crucial to reveal the transverse nature of the electromagnetic waves. However, despite its fundamental and practical importance, in high school, this property of light is often neglected. This is a pity not only for its conceptual relevance, but also because polarization gives the possibility to perform many brilliant experiments with low cost materials. Moreover, the treatment of this matter lends very well to an interdisciplinary approach between art, biology and technology, which usually makes things more interesting to students. For these reasons, we have developed, and in this work, we introduce a laboratory on light polarization for high school and undergraduate students. They can see beautiful pictures when birefringent materials are set between two crossed polarizing filters. Pupils are very fascinated and drawn into by what they observe. The colourful images remind them of those ones of abstract painting or alien landscapes. With this multidisciplinary teaching method, students are more engaged and participative, and also, the learning process of the respective physics concepts is more effective.

**Keywords :** light polarization, optical activity, multidisciplinary education, science and art

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