



EARLY VISUAL MEDIA LAB

C I C A N T

Filipe Alves is an architect and founder of the Silverbox studio. He investigates and works on this fascinating historical process in his free time. ORCID: <https://orcid.org/0009-0002-9266-7613>

Corresponding Author:

Filipe Alves
Silverbox Studio,
R. Pinheiro Chagas, 1050-178 Lisboa, Portugal
info@silverbox.pt

LIPPMANN STEREO

FILIPE ALVES

Silverbox Studio, Portugal

The Lippmann process is a unique method for capturing and reproducing colour, and it stands as one of the first colour photographic processes ever invented (1891). This extraordinary achievement earned its inventor, Gabriel Lippmann, the Nobel Prize in Physics in 1908. It records the standing waves formed when light reflects off a surface, such as the interface between air and the photosensitive emulsion. These standing waves are "imprinted" within the emulsion, which contains crystals small enough to capture the details of these waves, ranging from 170 nm to 350 nm.

The resulting image appears monochromatic at first glance. Still, when illuminated with white light, the microscopic mirrors created by the interference selectively reflect the colours

corresponding to the original interference through constructive interference. This intricate and almost forgotten process is one of the purest forms of colour photography. For over a decade, I have been dedicated to its revival. However, it remains a challenging technique to master, as it operates on such a small scale that even the slightest chemical variation can drastically alter the results.

The stereoscopic pair presented here was created using the Lippmann process in its silver albumen emulsion variant. Each frame measures 6x6 cm and was captured sequentially by moving the camera 10 cm laterally between shots. Small shifts in the positioning of some flowers can be noticed between the frames.



Fig. 1 Pair of 6x6cm. Albumen Lippmann plates mounted on Wiener prisms.