

History of Photography

The **history of [photography](#)** began in remote antiquity with the discovery of two critical principles: [camera obscura](#) image projection and the observation that some substances are visibly altered by exposure to light. There are no artifacts or descriptions that indicate any attempt to capture images with light sensitive materials prior to the 18th century (with the arguable exception of a possibly photographic process used to create the mysterious [shroud of Turin](#)).

Around 1717 [Johann Heinrich Schulze](#) captured cut-out letters on a bottle of a light-sensitive slurry, but he apparently never thought of making the results durable. Around 1800 [Thomas Wedgwood](#) made the first reliably documented, although unsuccessful attempt at capturing camera images in permanent form. His experiments did produce detailed [photograms](#), but Wedgwood and his associate [Humphry Davy](#) found no way to fix these images.

In the mid-1820s, [Nicéphore Niépce](#) first managed to fix an image that was captured with a camera, but at least eight hours or even several days of exposure in the camera were required and the earliest results were very crude. Niépce's associate [Louis Daguerre](#) went on to develop the [daguerreotype](#) process, the first publicly announced and commercially viable photographic process. The daguerreotype required only minutes of exposure in the camera, and produced clear, finely detailed results. The details were introduced to the world in 1839, a date generally accepted as the birth year of practical photography.^{[2][3]} The metal-based daguerreotype process soon had some competition from the paper-based [calotype negative](#) and [salt print](#) processes invented by [William Henry Fox Talbot](#) and demonstrated in 1839 soon after news about the daguerreotype reached Talbot. Subsequent innovations made photography easier and more versatile. New materials reduced the required camera exposure time from minutes to seconds, and eventually to a small fraction of a second; new photographic media were more economical, sensitive or convenient. Since the 1850s, the [collodion process](#) with its glass-based [photographic plates](#) combined the high quality known from the Daguerreotype with the multiple print options known from the calotype and was commonly used for decades. [Roll films](#) popularized casual use by amateurs. In the mid-20th century, developments made it possible for amateurs to take pictures in [natural color](#) as well as in [black-and-white](#).

The commercial introduction of computer-based electronic digital cameras in the 1990s soon revolutionized photography. During the first decade of the 21st century, traditional film-based photochemical methods were increasingly marginalized as the practical advantages of the new technology became widely appreciated and the image quality of moderately priced digital cameras was continually improved. Especially since cameras became a standard feature on smartphones, taking pictures (and instantly publishing them online) has become a ubiquitous everyday practice around the world.