

The history of photography has roots in remote antiquity with the discovery of the principle of the camera obscura and the observation that some substances are visibly altered by exposure to light. As far as is known, nobody thought of bringing these two phenomena together to capture camera images in permanent form until around 1800, when Thomas Wedgwood made the first reliably documented although unsuccessful attempt. In the mid-1820s, Nicéphore Niépce succeeded, but 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 photographic process, which required only minutes of exposure in the camera and produced clear, finely detailed results. It was commercially introduced in 1839, a date generally accepted as the birth year of practical photography.

The metal-based daguerreotype process soon had some competition from the paper-based calotype negative and salt print processes invented by Henry Fox Talbot. Subsequent innovations reduced the required camera exposure time from minutes to seconds and eventually to a small fraction of a second; introduced new photographic media which were more economical, sensitive or convenient, including roll films for casual use by amateurs; and made it possible 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.

This art is the result of combining several different technical discoveries. Long before the first photographs were made, Chinese philosopher Mo Ti and Greek mathematicians Aristotle and Euclid described a pinhole camera in the 5th and 4th centuries BC.E In the 6th century CE, Byzantine mathematician Anthemius of Tralles used a type of camera obscura in his experiments.

Ibn al-Haytham (Alhazen) (965 in Basra – c. 1040 in Cairo) studied the camera obscura and pinhole camera. Albertus Magnus (1193/1206–80) discovered silver nitrate, and Georges Fabricius (1516–71) discovered silver chloride. Daniel Barbaro described a diaphragm in 1568. Wilhelm Homberg described how light darkened some chemicals (photochemical effect) in 1694. The novel Giphantie (by the French Tiphaigne de la Roche, 1729–74) described what could be interpreted as photography.

Around the year 1800, Thomas Wedgwood made the first known attempt to capture the image in a camera obscura by means of a light-sensitive substance. He used paper or white leather treated with silver nitrate. Although he succeeded in capturing the shadows of objects placed on the surface in direct sunlight, and even made shadow-copies of paintings on glass, it was reported in 1802 that ". The images formed by means of a camera obscura have been found too faint to produce, in any moderate time, an effect upon the nitrate of silver." The shadow images eventually darkened all over because " no attempts that have been made to prevent the uncoloured part of the copy or profile from being acted upon by light have as yet been successful." Wedgwood may have prematurely abandoned his experiments due to frail and failing health; he died aged 34 in 1805.

"Boulevard du Temple", a daguerreotype made by Louis Daguerre in 1838, is generally accepted as the earliest photograph to include people. It is a view of a busy street, but because the exposure time was at least ten minutes the moving traffic left no trace. Only the two men near the bottom left corner, one apparently having his boots polished by the other, stayed in one place long enough to be visible.

In 1816 Nicéphore Niépce, using paper coated with silver chloride, succeeded in photographing the images formed in a small camera, but the photographs were negatives, darkest where the camera image was lightest and vice versa, and they were not permanent in the sense of being reasonably light-fast; like earlier experimenters, Niépce could find no way to prevent the coating from darkening all over when it was exposed to light for viewing. One of the oldest photographic portraits known, made by Joseph Draper of New York, in 1839 or 1840, of his sister, Dorothy Catherine Draper.

The oldest surviving permanent photograph of the image formed in a camera was created by Niépce in 1826 or 1827. It was made on a polished sheet of pewter and the light-sensitive substance was a thin coating of bitumen, a naturally occurring petroleum tar, which was dissolved in lavender oil, applied to the surface of the pewter and allowed to dry before use. After a very long exposure in the camera (traditionally said to be eight hours, but in fact probably several days), the bitumen was sufficiently hardened in proportion to its exposure to light that the unhardened part could be removed with a solvent, leaving a positive image with the light regions represented by hardened bitumen and the dark regions by bare pewter. To see the image plainly, the plate had to be lit and viewed in such a way that the bare metal appeared dark and the bitumen relatively light.

A new era in color photography began with the introduction of Kodachrome film, available for 16 mm home movies in 1935 and 35 mm slides in 1936. It captured the red, green and blue color components in three layers of emulsion. A complex processing operation produced

complementary cyan, magenta and yellow dye images in those layers, resulting in a subtractive color image. Maxwell's method of taking three separate filtered black-and-white photographs continued to serve special purposes into the 1950s and beyond, and Polachrome, an "instant" slide film that used the Autochrome's additive principle, was available until 2003, but the few color print and slide films still being made in 2015 all use the multilayer emulsion approach pioneered by Kodachrome.