

Van Monckhoven Désiré Carolus Emanuel

Born: September 25, 1834 - Gent

Died: December 12, 1882 – Gent

As a boy Van Monckhoven already shows an interest in physics and mathematics. As a 16-year old he publishes a “*Handbook of Chemistry*” (in Dutch) in which he devotes a chapter to the chemistry of photography.

To earn a living, Van Monckhoven works as a clerk at a bank in Ghent. However, his interests for photography prevail over his job of pen-pusher. Due to his inquisitive mind about the composition of photographic developers, he draws up rules, while professional photographers still work empirically.

In 1855 he publishes “*Traité de Photographie sur Collodion*” which becomes the standard book for the next 25 years. One year later (1856) he publishes “*Traité Général de Photographie*” which is often reprinted (7 editions) and translated all over the world.

In 1857 Van Monckhoven starts his studies at the Faculty of Sciences at the University of Gent and obtains his master’s degree in 1862. The same year he becomes a co-founder of the “*Revue belge de Photographie*” to which he contributes extensively.

The Science of Photography

From 1860 on, the enlarging of photographs kindles his interest. The collodion plates of the negatives are usually small and need to be enlarged on paper. A task awaits the photographers of this period: shortening the exposure time by creating more sensitive emulsions and stronger light sources. The collodion plates and the photographic paper are very low light sensitive and need a delicate long exposure time. More light is needed: to obtain a higher light intensity Van Monckhoven builds a “*dialytic enlargement apparatus*” with a better sunlight condenser to improve the earlier one designed by Woodward (USA-1860). Van Monckhoven is the author of “*Photographische Optik*” published in 1866 in Vienna and translated into English in 1867. The same year Van Monckhoven and the portrait photographer Rabending establish in Vienna a studio with emphasis on catching the daylight to shorten the exposure time. It is not a very successful enterprise and in 1870 he is back in Ghent.

For the next challenge Van Monckhoven researches the techniques of making the emulsion of gelatin and silver bromide plates more light-sensitive. Collodion emulsions are being replaced by gelatin. In 1870 he erects a laboratory where he manufactures emulsions on glass plates by turning silver nitrate (120 kg a month!) into silver bromide, through adding ammonium carbonate to gelatin and treating it with hydrobromic acid, next using ammonia to obtain a greater sensitivity. The ripening is further enhanced by heating the plates for a certain time. Van Monckhoven delivers his emulsions to the glass-plate factories of Bernaert (Ghent) and Palmer Descamps (Kortrijk) for coating and distribution on the market.

Van Monckhoven unfortunately dies at the age of 48. Little is known of what he discovers in his private observatory and of the relation between the light sensitivity of photographic emulsions and the spectrum of gases in vacuum tubes.

A street in Ghent is named after him.

Publications by Van Monckhoven

“*Traité populaire de photography sur Collodion*” (Paris, 1862)

« *Instructions sur le procédé au gelatino-bromure d’argent* » (1879)

« *Du gelatino-bromure d’argent* » (1880)