

**Bibliographic Reference:** Eleftheriadis, I., Tsatsaroni, E., & Nikolaidis, N. (2015). Chemistry and Technology of Color [Undergraduate textbook]. Kallipos, Open Academic Editions. http://dx.doi.org/10.57713/kallipos-995

## Abstract

The book, chemistry and technology of colour, covers topics such as the basic principles of colours of the visible spectrum including the mixing of colour radiations the additive and subtracting colours of the spectrum, the classification of dyes including the various dye classes such as azo dyes nitro and nitroso dyes, polyene and polymethinic dyes, carbonyl dyes, sulphur dyes and pigments.the chemistry of optical brighteners for natural, synthetic fibres and detergents is discussed.the ecological and toxicological aspects of dyes in relation to environment is described.the physicochemistry of dyeing and the thermodynamics of dyeing is explained.the colour measurement and the colour parameters associated with to the colour application is expalined for the various colour systems used such as cielab, cmc etc. The colour measurements of dye solutions is also explained. Textile dyeing machines used

in the industry such as winches, overflow jets, beam dyeing machines are described.textile printing applications such as flexographic printing, gravure printing, flat bed printing, rotary printing and digital printing is described in detail. The application of dyes and pigments to natural and synthetic fibres is discussed together with the chemistry of textile fibres such as wool, cotton, regenerated cellulosic fibres, polyester, polyamide, polyacrylonitrile, polyurethane fibres. The chemistry of dying together with the chemistry of pretreating and aftertreating auxiliaries such as surface active agents, anionic, non ionic, cationic, softening and fixing agents, enzyme treatments using enzymes such as amylase, catalase, protease, indigo, cellulaseantipilling enzymes, is discussed. The fastness of the dyed fibres in washing, light fastness is also given according to international iso norms.



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