1. Record Nr. UNINA9910254028703321 Autore Gürses Ahmet Titolo Dyes and Pigments / / by Ahmet Gürses, Metin Açkyldz, Kübra Güne, M. Sadi Gürses Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,, 2016 **ISBN** 3-319-33892-7 Edizione [1st ed. 2016.] Descrizione fisica 1 online resource (88 p.) Collana SpringerBriefs in Green Chemistry for Sustainability, , 2212-9898 667.2 Disciplina Soggetti Chemical engineering Organic chemistry Environmental chemistry Industrial Chemistry/Chemical Engineering **Organic Chemistry Environmental Chemistry** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references at the end of each chapters. Nota di contenuto Historical Development of Colorants -- Dyes and Pigments: Their Structure and Properties -- Classification of Dye and Pigments --Dyeing and Dyeing Technology -- Colorants in Health and Environmental Aspects. Sommario/riassunto In this book the authors go back to basics to describe the structural differences between dyes and pigments, their mechanisms of action, properties and applications. They set the scene by explaining the reasons behind these differences and show how dyes are predominately organic compounds that dissolve or react with substrates, whereas pigments are (predominantly) finely ground inorganic substances that are insoluble and therefore have a different mode of coloring. They also describe the role of functional groups and their effect on dyeing ability, contrasting this with the way in which pigments cause surface reflection (or light absorption) depending on their chemical and crystalline structure and relative particle size. The book explores the

environmental impact of dyes in a section that covers the physical, chemical, toxicological, and ecological properties of dyes and how

these are used to assess their effect on the environment and to estimate whether a given product presents a potential hazard. Lastly, it assesses how, in addition to their traditional uses in the textile, leather, paper, paint and varnish industries, dyes and pigments are indispensable in other fields such as microelectronics, medical diagnostics, and in information recording techniques.