

PLEN 2

Code crack of colour diversity - Maguy Jaber

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Research on pigments formulations is not only a current trend in contemporary conservation science and technical art history, but is something that has preoccupied painters and researchers in cosmetic field throughout the centuries. Most painters and researchers are constantly looking for new materials or paint techniques in order to achieve new effects, for their works to last longer, to better express their intentions than before.

A pigment is an insoluble material in the medium where it is dispersed in. Depending on its particle size, the presence of defects in its structure, the reactive sites that allow interaction with other additives, a wide colour diversity can be obtained. To fully understand the physico-chemical mechanisms involved in the colour process will be of inestimable value.

Tuning the colour properties by a better control of the crystalline structure will be the concern of the present talk.

Several examples will be discussed: inorganic pigments such as green earths, lake pigments and cadmium sulfides. The preparation of these inorganic and hybrid materials is described according to historical recipes. Grinding of green earths induces a complete change in their properties due to a modification in their particle size and reactivity. Cadmium sulfide pigments assume different hues from yellow to orange, depending on their conditions of formation and the presence of defects in their structure.