



DID-OR-002

Ten Fashionable Years – Keeping Dyeing Chemistry from Dying

Sergio Palazzi

*ISIS di Setificio “P. Carcano”, Como
studio@kemia.it*

Almost ten years have passed since the first cycle of “reformed” Italian High School was completed. The laws of 2010-2012 strongly rearranged every curricula¹, and had a very harsh effect on the *Istituti Tecnici*. The two former courses of *Perito Chimico Tintore* (Dyeing Chemistry Engineer) and *Perito Tessitore* (Weaving Engineer) merged into a brand new interdisciplinary path, that a bad marketing strategy baptized *Tecnico di Sistema Moda* (Fashion System Technician), or S.M. It has two subsection (for textile and for leather industry); our *Setificio*, unique in Italy, also has a section for Fabric Designers, inherited from an older tradition, that faces disrupting innovations in printing.

Oddily, those of S.M. are the only schooling paths in Italy that have Applied Chemistry among the characterizing subjects for the final exam, other than the “true” chemical course (*Chimica e Materiali*). But the latter is mostly focused on general items, so, despite their name, *Sistema moda* graduates are in practice the only specialists surfing the waves of innovation that dyers and printers, finishers and weavers, QC and certification labs are struggling to keep up with. And textiles are everywhere, fashion is only the tip of the iceberg. It is relevant that the majority of S.M. students continue their studies, and not only in STEAM; a good number then comes back in the textile field with widened experiences.

The world of textile covers almost all the branches of chemistry and is less than halfway through a radical transformation, due to changes in materials, procedures and approaches, driven by sustainability instances². Italy is leading in most of these fields, but there is a dramatic lack of people with a sound technical background, so we need to motivate young people also with more adequate teaching procedures. After a decade, it is worth reflecting on what we did in the meanwhile. There seems to be a new push toward more substantial changes in secondary and tertiary education, developing integrated and advanced curricula, so it could be useful to collect and share any effective idea.

In this oral communication, that also looks at some already published works³ and others still in progress, we will propose several suggestions on how to introduce, in more effective ways, the chemistry and technologies of dyes, formulations, pigments and ligands, finishing agents, new and/or recyclable fibers, digital colour science, water and energy saving etc, supporting a lab-centered teaching along the five years (or soon 4+2?). Learning approaches often lean on real-life references, from historical documentation to the ZDHC and REACH databases and new production quality protocols, in close interaction with academic and industrial environments. We also reflect on the pros and cons arising from these experiences.

References:

[1] S. Palazzi, CnS – La Chimica nella Scuola, XXXIV-3, 2012, 284-289

[2] see the always growing corpus of EU norms on <http://environment.ec.europa.eu/strategy/textiles-strategy.en>

[3] S. Palazzi, La Chimica e l'Industria online, IV-4, 2022, 54-57