

# The laboratory of environmental chemistry and clean processes: research in the service of a sustainable tunisian economy.

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## Abstract

Work in the "Environmental Chemistry and Clean Processes"1 research laboratory falls within the general framework of applied research integrated into its socio-economic environment. This environment is distinguished by three main characteristics which represent, for research, real opportunities for investigation: 1 / an increasingly arid climate which strongly decreases the resilience of human water consumer activities, 2 / a textile industry in constant competition with its Asian and Moroccan competitors and 3 / a multidisciplinary university centre which puts on the job market hundreds of young graduates trained in various technical specialties. It is in this environment that evolve the three research themes of the laboratory: Chemistry and engineering of the environment, Organic chemistry and natural substances and Chemistry and engineering textile The conference will be devoted to one of the most recent research works developed within the laboratory which shows an example of total synergy of the three themes in the service of a common objective: the sustainability of the Tunisian industry and more specifically the textile industry. Indeed, the latter is not only one of the most polluting industrial activities but also one of the largest consumers of water and energy resources. Thus, replacing water with a more abundant solvent that can be recycled without great effort, supercritical CO<sub>2</sub>, can only strengthen the adaptability of the Tunisian textile industry to an increasingly arid environment. The diagram below, which will be developed during this conference, shows the contribution of the laboratory's three research themes in the development of this new field of exploration: dyeing in a supercritical medium.

