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ABSTRACTS BOOK

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APPLICATION OF AUGMENTED REALITY IN CHEMISTRY TEACHING

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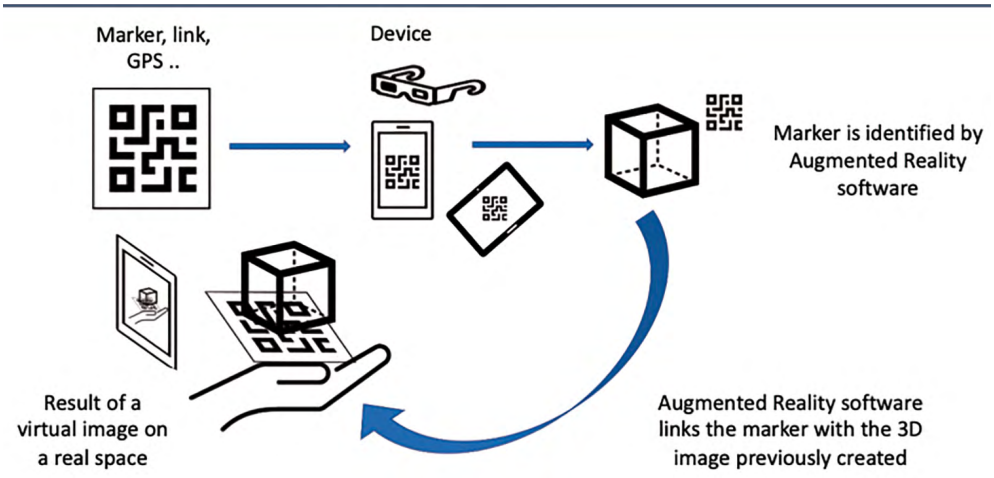
Augmented reality (AR) is the combination of real environment and virtual elements that have the task of enriching reality with information or other elements. In this sense, chemistry, and organic chemistry in particular, are disciplines for which students require an adequate spatial vision to understand the concepts and we propose that augmented reality can support and promote spatial skills.

Although different studies have been carried out in recent years on the use of augmented reality in this context, it is necessary to deepen into its application from a multidisciplinary point of view, being in close contact with the developers of the applications and considering the needs and criteria of professors of different levels and students.

To this end, this project has counted on the collaboration with the company CreativiTIC, through its MetAClass Studio platform. From our side, we needed to create markers and the linked chemical structures, which students can then visualise the molecular structures in 3D directly from their mobile devices. The development has been carried out in a multidisciplinary way and covering different educational levels, from Secondary Education to University.



Finally, we conducted an evaluation of this tool to qualitatively assess whether students achieved a better understanding and improved their visualisation of molecular structures.

This project demonstrates how the appropriate use of augmented reality allows for a better understanding of chemical structures and their reactions, as well as increasing student motivation, but also highlights the need for proper teacher training and the appropriate implementation of the technology.

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