

*Title:* **Synthesis and applications of azo compounds**

*Student:* Georgina González Franquet

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*Supervisor/s:* Dr. Paul Lloyd-Williams

*Department of Inorganic and Organic Chemistry*

Azo compounds have a wide variety of properties that make them very useful in various fields. They comprise more than 60% of the dye chemical industry, but their use in organic synthesis as initiators of radical reactions and their role in other fields such as biomedicine, glass lens fabrication, etc. are also noteworthy. The following report is a review of some of the most widely used azo compound syntheses as well as the most important applications of these molecules. The classical methods of azo synthesis will be reviewed: azo coupling reaction, Mills reaction and Wallach reaction, followed by a series of more recent methods that are less used owing to their limitations.