



**Showcasing research from Professor René Wilhelm's laboratory, Institute of Organic Chemistry, Clausthal University of Technology, Clausthal-Zellerfeld, Germany.**

Synthesis of new graphene oxide/TiO<sub>2</sub> and TiO<sub>2</sub>/SiO<sub>2</sub> nanocomposites and their evaluation as photocatalysts

The synthesis of graphene oxide - P-25 and TiO<sub>2</sub>/SiO<sub>2</sub> hybrid materials, as well as their photocatalytic behaviour is discussed. Different synthetic routes to these composites were studied. Two different types of graphene oxide were used: edge-functionalized graphene oxide (edge-GO) and graphene oxide produced using the Hummers method (Hum-GO). The photocatalytic activity of the different nanocomposites was analysed by studying the degradation of methyl orange (MO) and the photocatalytic reduction of benzaldehyde. The different graphene oxide types, TiO<sub>2</sub> materials, and synthetic routes had an impact on the photocatalytic activity and selectivity.

**As featured in:**



See René Wilhelm *et al.*,  
*Catal. Sci. Technol.*, 2023, **13**, 4367.