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TiO2-H2O interactions by fast field cycling (FFC) NMR relaxometry

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Titanium dioxide is a very well known photocatalyst which is widely used for environmental remediation. The interactions between TiO2 surface and organic contaminants are still poorly understood. Conceivably, water is an ubiquitous solvent and most of the TiO2 research deals with H2O. We have considered the possibility to apply FFC-NMR relaxometry for a deep understanding of the interactions between titanium dioxide surface and water molecules. Early results suggested the presence of different surface waters according to the chemical nature of the active sites present in the TiO2 system.

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