

Synthesis and Characterisation of Mesocrystals for the Photodegradation of Microplastics

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- 8) Stručná anotace:** Mesocrystals are superstructures of crystallographically oriented nano/microcrystals that exhibit enhanced charge separation and light absorption, making them exceptional candidates for environmental remediation. This research focuses on the synthesis and characterisation of mesocrystals designed for the photocatalytic degradation of microplastics, an omnipresent threat. Characterisation methods such as XRD, Raman, XPS, FESEM, and UV-Vis spectroscopy will be utilised to elucidate structural, morphological, and optical properties. The photocatalytic activity of these mesocrystals will be evaluated under light irradiation of various wavelengths, targeting to break down common microplastics into environmentally benign by-products.