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Revitalisation of group IV metal-oxo clusters: synthetic approaches, structural motifs and applications

Recent research has reignited interest in Group IV chemistry. This perspective article explores representative examples of synthetic approaches that have enabled the effective design and discovery of new Ti, Zr, and Hf multinuclear clusters. These clusters showcase a broad spectrum of desirable functionalities, including photocatalysis and electrocatalysis, with growing interest in applications related to energy, in materials science for electronics and sensing. Additionally, it emphasizes the rise of new phenomena, including metalloaromaticity.



