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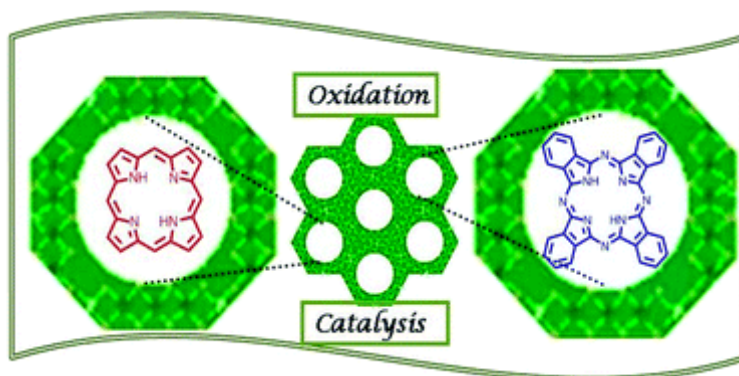
Inorganic helping organic: recent advances in catalytic heterogeneous oxidations by immobilised tetrapyrrolic macrocycles in micro and mesoporous supports

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Abstract

This review considers several aspects (synthetic procedures and, particularly, catalytic applications) of the recent literature (since 2000) regarding the immobilisation of tetrapyrrolic macrocycles (namely porphyrins and phthalocyanines) in micro (NaY and NaX zeolites) and mesoporous inorganic supports (M41S family), and their employment in catalysis, predominantly in oxidation. Emphasis is placed on photocatalysis, which is of importance in the degradation of pesticides, herbicides, health care, personal care and domestic care products, all of which represent a current major environmental concern. Pertinent reflections are presented on the nature of both synthetic issues and catalytic evaluations, within the perspective of what has happened in the field so far, and what are the main guidelines and problems for future developments.



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