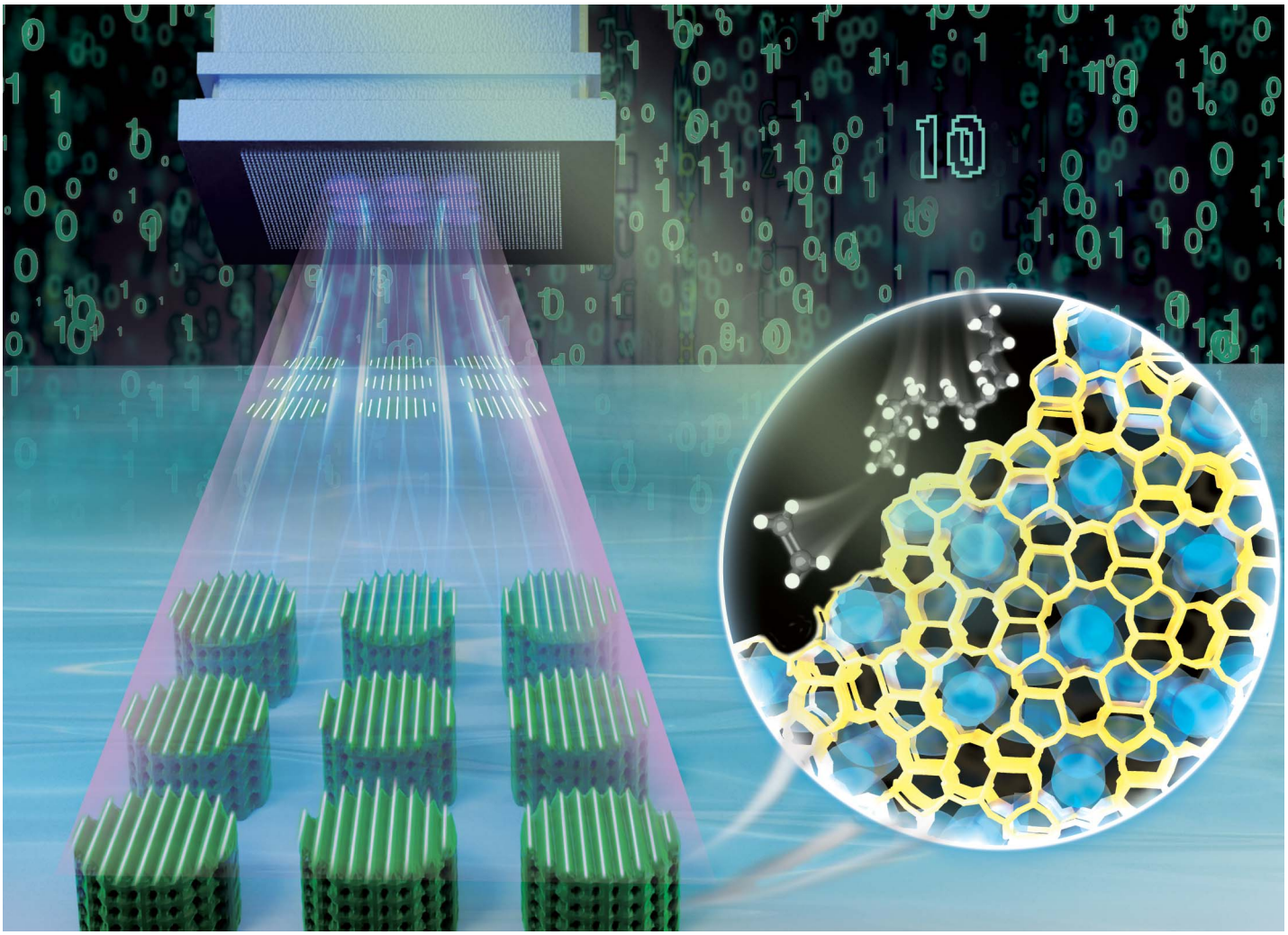
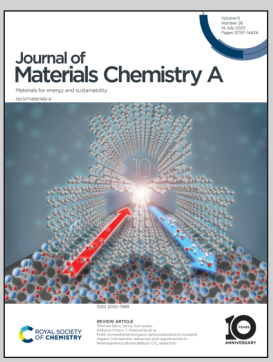


Showcasing research from Professor Wei Lin's laboratory, Research Institute of Petroleum Processing, SINOPEC, Beijing, China.

In situ crystal engineering on 3D-printed woodpile scaffolds: a monolith catalyst with highly accessible active sites for enhanced catalytic cracking

A highly active monolith zeolitic catalyst was developed for enhanced catalytic cracking by leveraging in-situ crystal engineering on a digital light processing (DLP) 3D-printed woodpile scaffold. By seed-anchoring, a thick layer of ZSM-5 nanocrystals (ca. 60 μm) was in-situ generated on the monolith surface, resulting in a high crystallinity of 41.2%. Furthermore, the radial interconnected channels of the fabricated monolith zeolitic catalysts exhibited an excellent mass transfer advantage. The monolith zeolitic catalyst demonstrated superior activities in 1,3,5-triisopropylbenzene (TIPB) and n-octane cracking reactions.

As featured in:



See Wei Lin *et al.*, *J. Mater. Chem. A,* 2023, **11**, 13945.

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