Novel Nanosheet Derivatives for Adsorbtion and Catalysis*

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Layered nanosheet materials, which contain microporous layers sitting one on top of the other in a lamellar fashion, represent an exciting new class of materials for catalysis and adsorbtion applications. In this work, two novel derivatives created from the MCM-22 zeolite precursor structure will be described. In particular, the polyethyleneimine loaded PEI-MCM-36 crystal will be investigated for its application to carbon dioxide capture, and a newly synthesized pillared MCM structure will be described.

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