

## Electronic Supplementary Information

### **A new layered MWW zeolite synthesized with the bifunctional surfactant template and the updated classification of layered zeolite forms obtained by direct synthesis**

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TEM imaging of layer disorder (Figure S1.)

Expanded Fig 3. with XRD patterns of various MWW layered forms before and after clacination; the latter represent finally used catalysts (Figure S2).

Low angle XRDs for swollen MIT-1 and UJM-1P (Figure S3.)

Catalytic reaction data for MWW zeolites (Table S1)

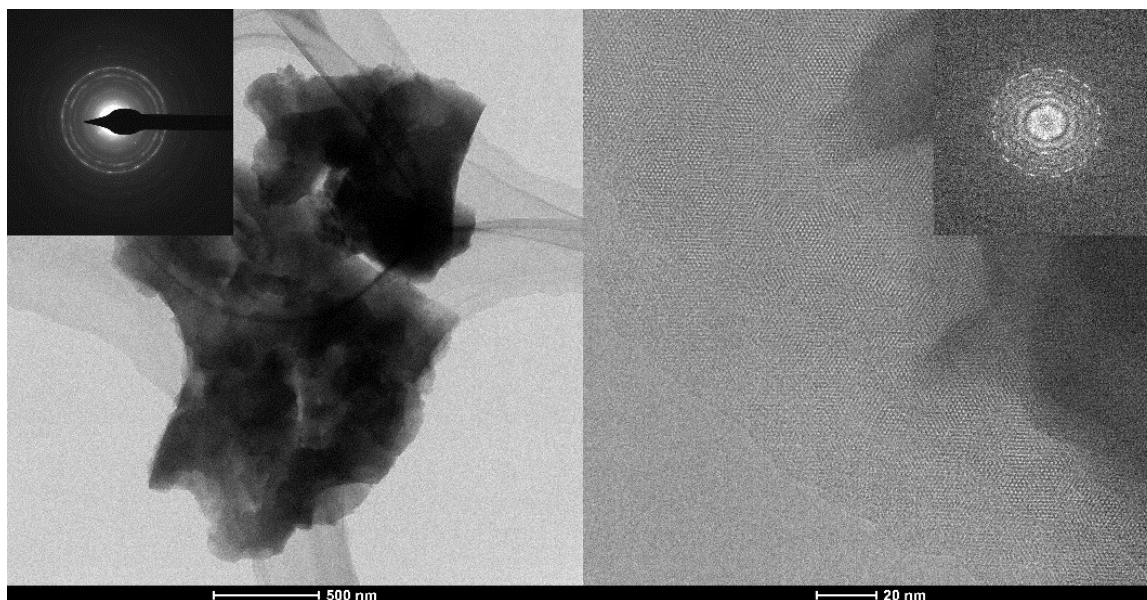
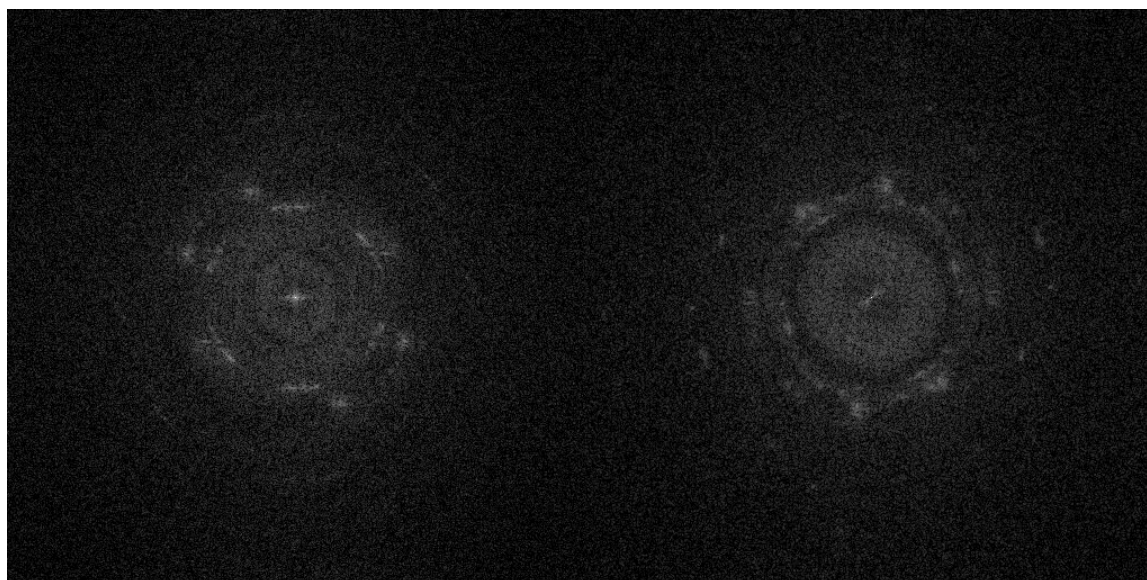


Figure S1. FFT patterns (upper images) and TEM images of UJM-1P with SAED (down right) and FFT (down left) patterns overlaid.

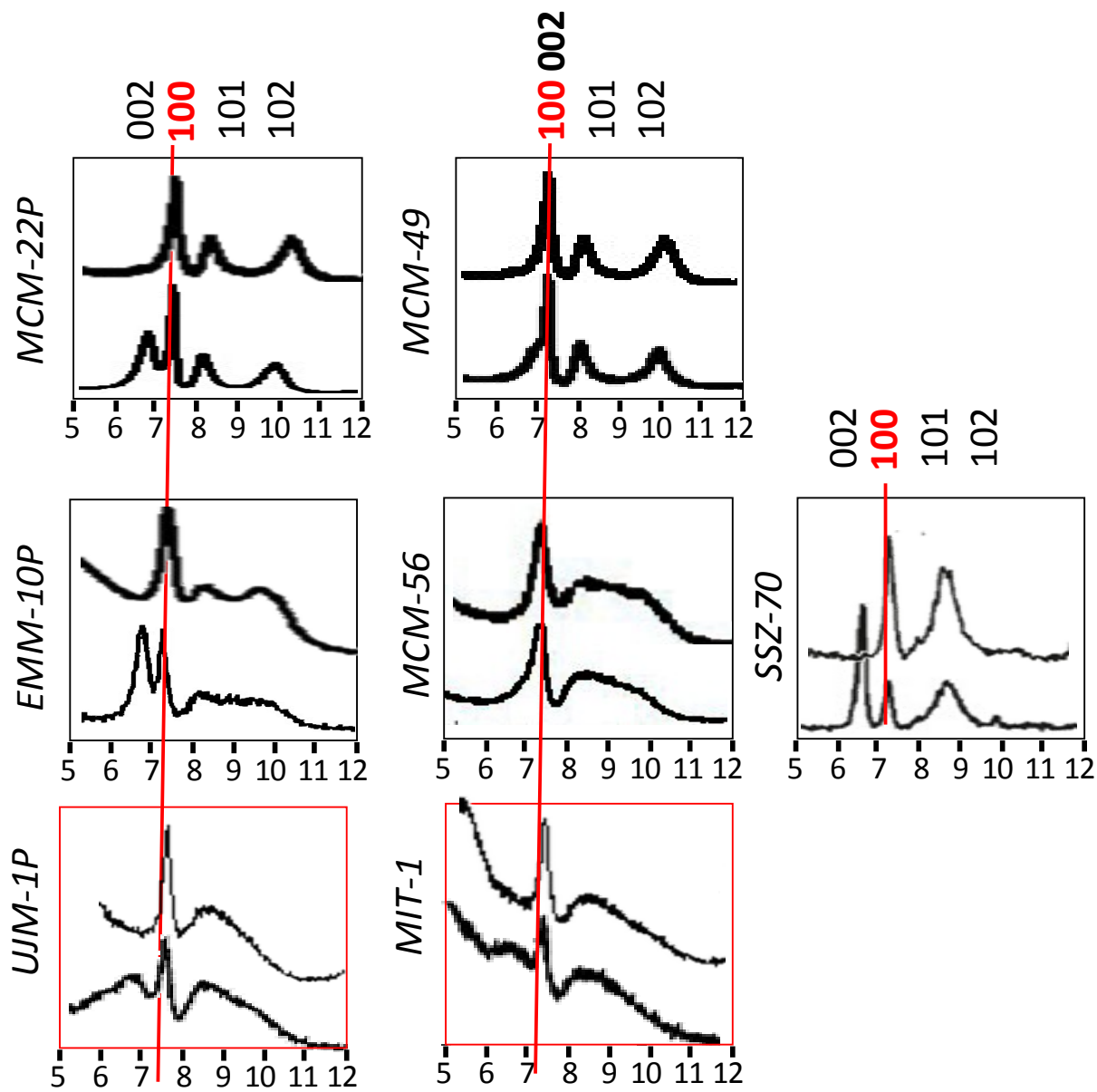


Figure S2. Expanded Fig. 3 comparing XRD patterns of various as-synthesized MWW layered forms with their calcined versions, representing the finally used catalysts.

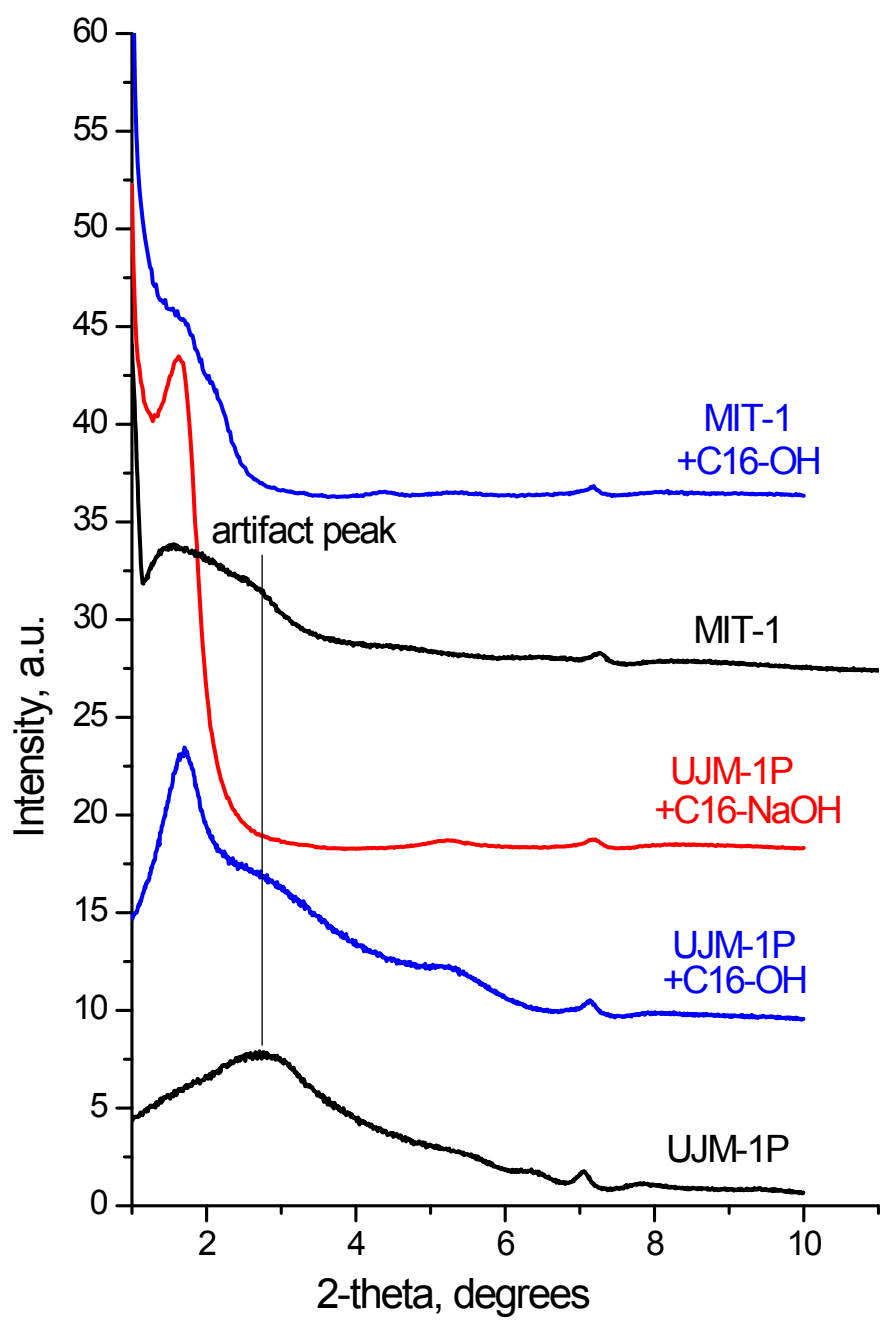


Figure S3. Low angle XRDs for swollen MIT-1 and UJM-1P

Table S1. Catalytic reaction data about various MWW catalysts in the benzylation of mesitylene.

<b>Zeolite</b>	<b>Benzyl alcohol conversion,%<sup>a</sup></b>	<b>Selevticity of BTB<sup>b</sup>, %<sup>a</sup></b>
UJM-1	100	100
MIT-1	57	89
MCM-22	63	91
MCM-56	100	94

<sup>a</sup>Reaction time=120 min

<sup>b</sup>2-benzyl-1,3,5-trimethylbenzene