



Supplementary Figure 1. This Figure S1 represents simulated kinematical electron diffraction patterns along [001] zone axis for different situations encountered in the investigated ZSM-5 crystals. (a) is a single crystal [001] zone pattern from which the occurrence of 210 type superreflections is clear while the 120 type superreflections are extinct. In other words, the observation of the 210 type superreflections provides an easy guide for distinguishing between the **a** and **b** directions, even though the corresponding lattice parameters are nearly equal. In (b) the pattern of a 90° rotational boundary is simulated: here the basic reflections 200 and 020 of the different components (black and grey) nearly perfectly overlap (the distinction between both cannot be observed in the SAED or FFT patterns of these radiation sensitive materials). Still, the difference with a single zone pattern can clearly be observed by the existence of two sets of superreflections along mutually perpendicular directions. The pattern in (c) represents the matrix and ramp situation where the ramp rotates counter clockwise 93° with respect to matrix which is recognized from the occurrence of superreflections in two nearly perpendicular directions, added by the observation of spot-splitting at the 220 type sites (black circle).