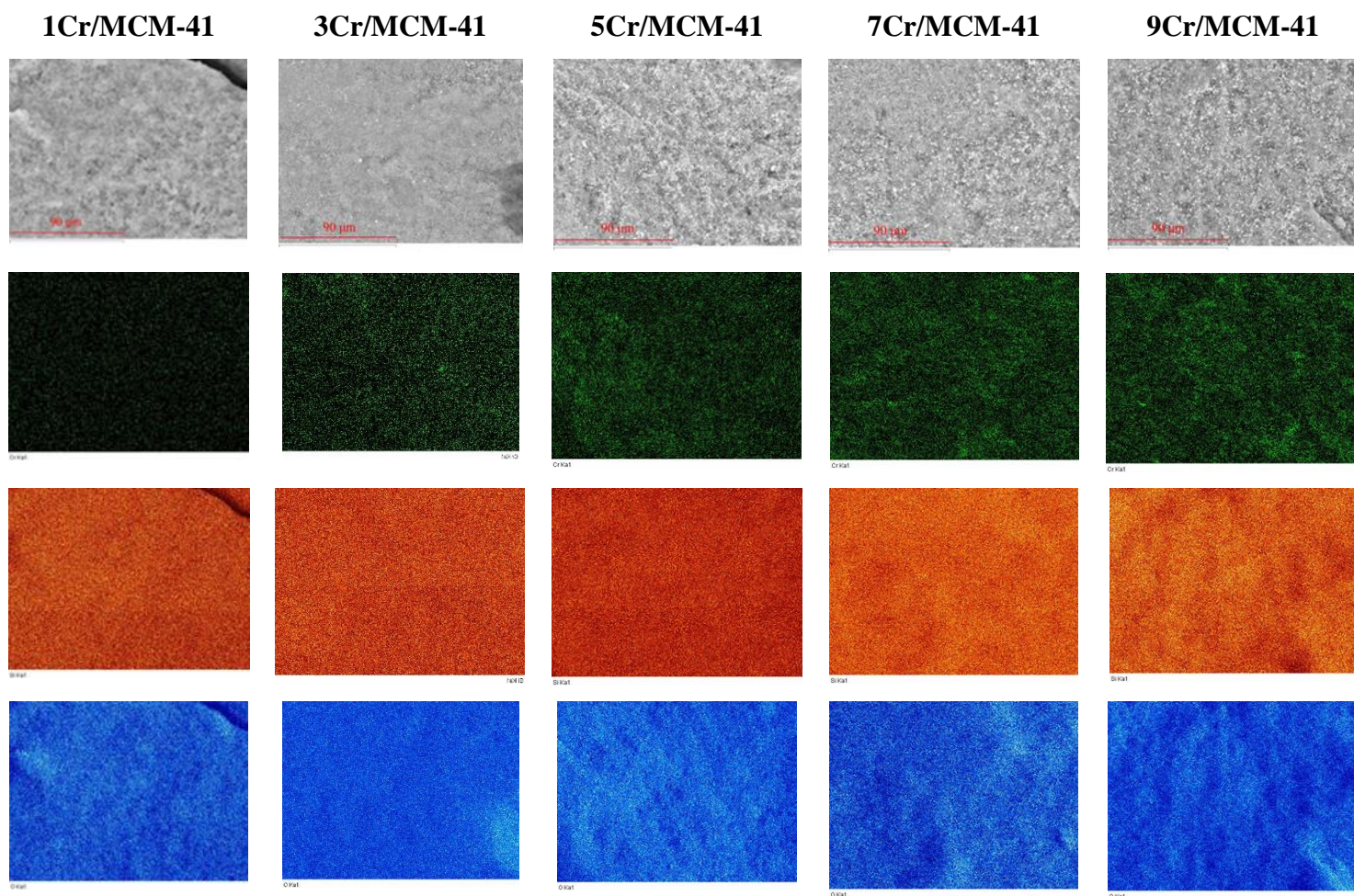


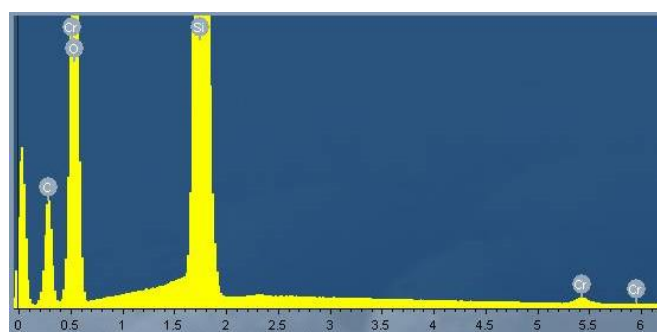
## Supplementary Materials

### Properties of $\text{CrO}_x/\text{MCM-41}$ and its catalytic activity in the reaction of propane dehydrogenation in the presence of $\text{CO}_2$

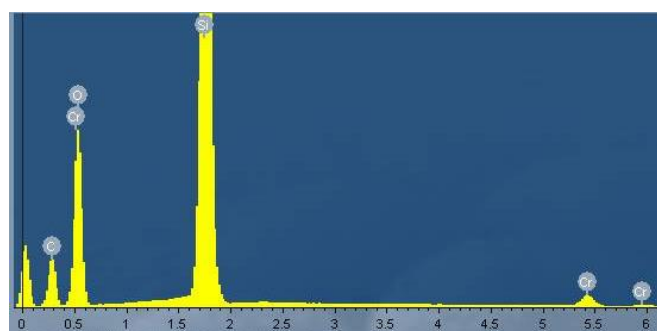


**Figure S1.** SEM images (the upper row) and chromium (the 2nd row), silicon (the 3rd row), oxygen (the lower row) distribution maps for the Cr/MCM-41 catalysts.

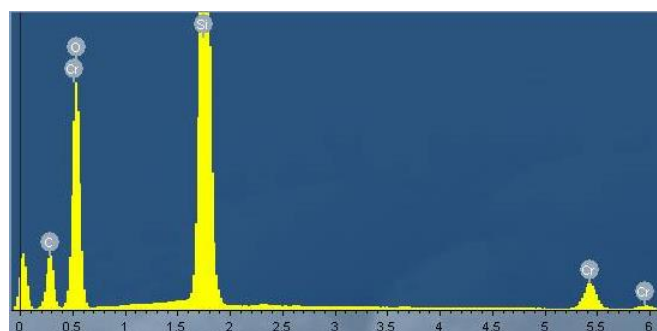
**1Cr/MCM-41**



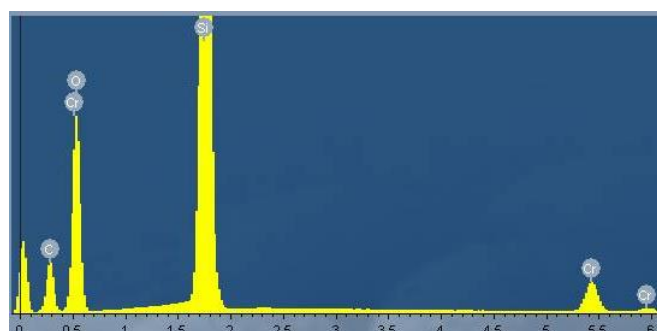
**3Cr/MCM-41**



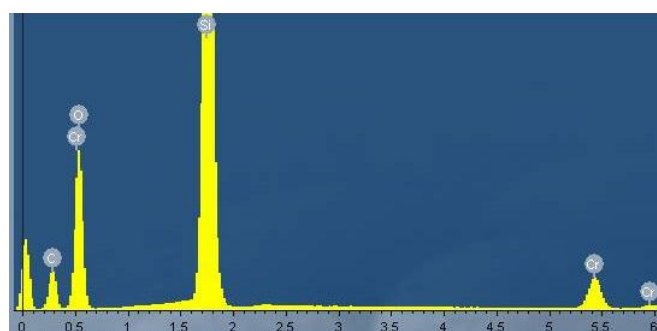
**5Cr/MCM-41**



**7Cr/MCM-41**



**9Cr/MCM-41**



**Figure S2.** EDS of Cr/MCM-41 catalysts.