

Supplementary material to

THE EFFECT OF METAL-TITANIA INTERACTION ON PHOTODEGRADATION IN SBA-15-SUPPORTED METAL-TITANIA PHOTOCATALYSTS

Sevgi Can Göl, Elif Akbay*

Eskişehir Technical University, Dept. of Chemical Engineering, İki Eylül Campus, Eskişehir, Turkey

Chem. Ind. Chem. Eng. Q. 29 (4) 281–289 (2023)

Table S1. Textural properties of reused Co-Ti-SBA-15.

TiO ₂ /SBA-15 (R=16)	Loading of Co (%) ^a	Surface Area BET ^b (m ² /g)	Pore Volume ^c (cm ³ /g)	Pore Diameter (nm)
Fresh catalyst	7.1	533	0.62	5.44
Reused Catalyst	7.2	514	0.55	4.76

^a from SEM-EDX results, ^b Multipoint BET method, ^c from BJH method

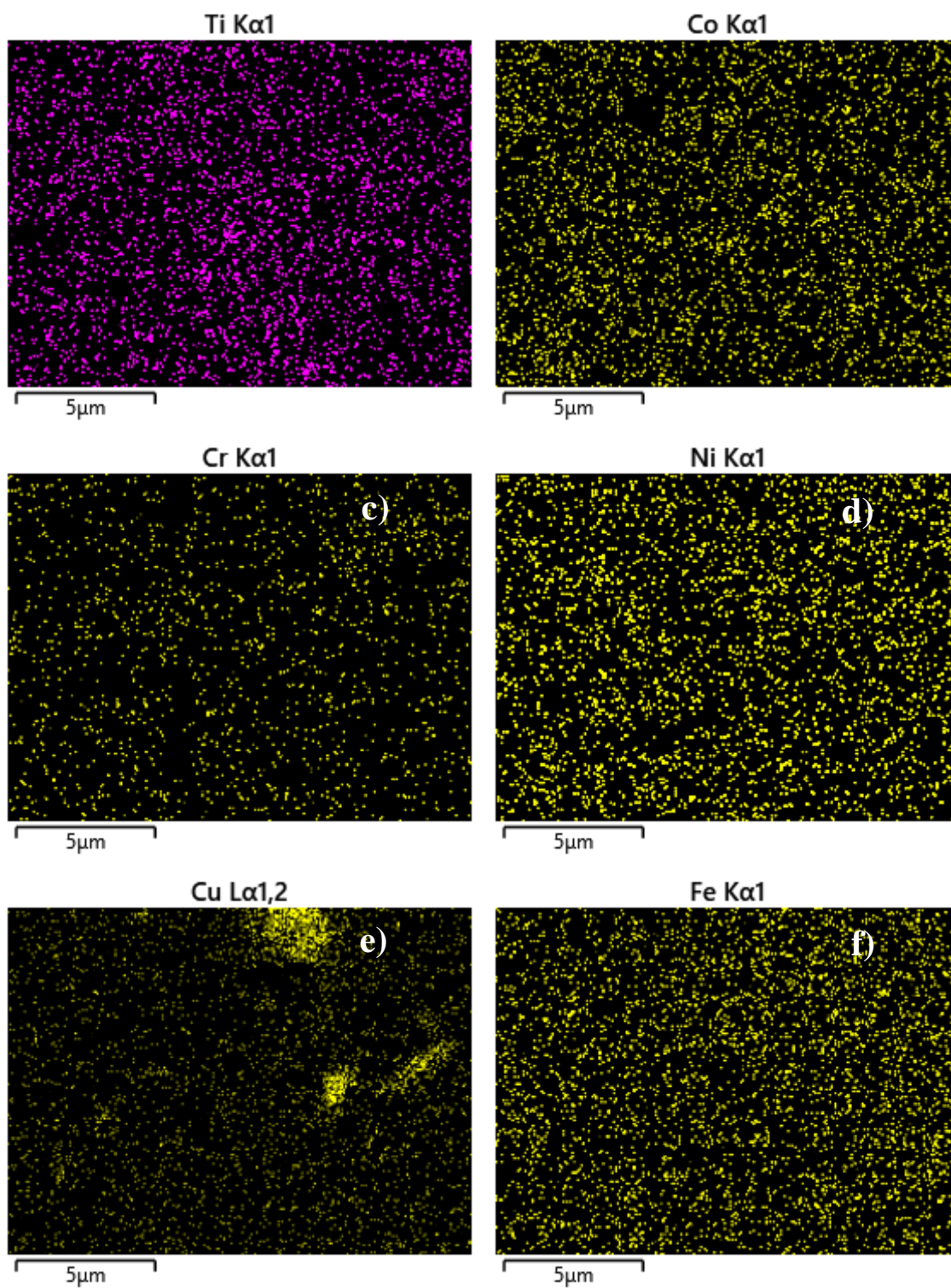


Figure S1. Element mapping images Ti-SBA-15 (a) and M-Ti-SBA-15; Co (b), Cr (c), Ni (d), Cu (e) and, Fe (f).

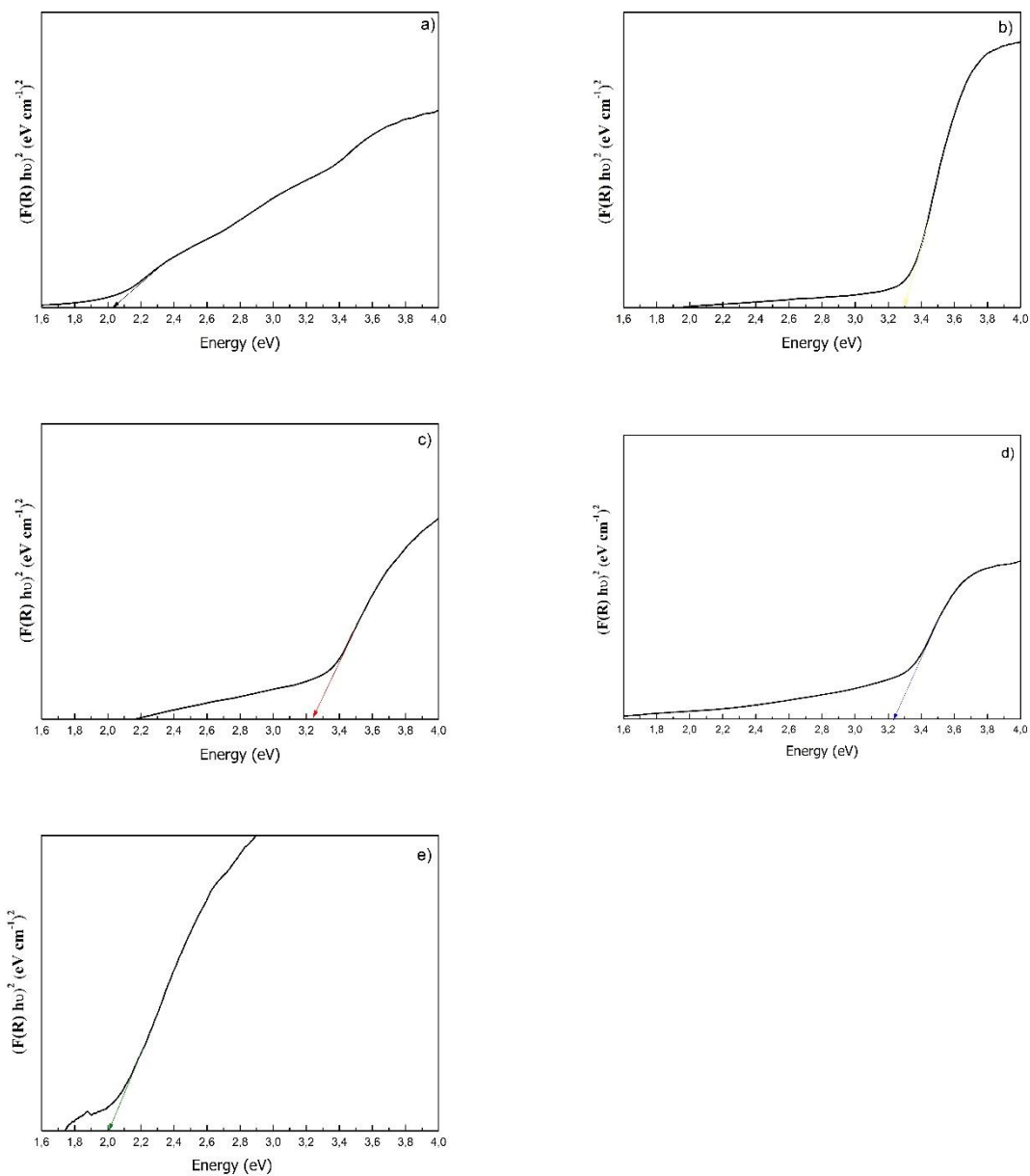


Figure S2. The bandgap energy (E_g) of M-Ti-SBA-15 by using the modified plot of the Kubelka-Munk function; M= Fe (a), Cu (b), Ni (c), Cr (d) and, Co (e).

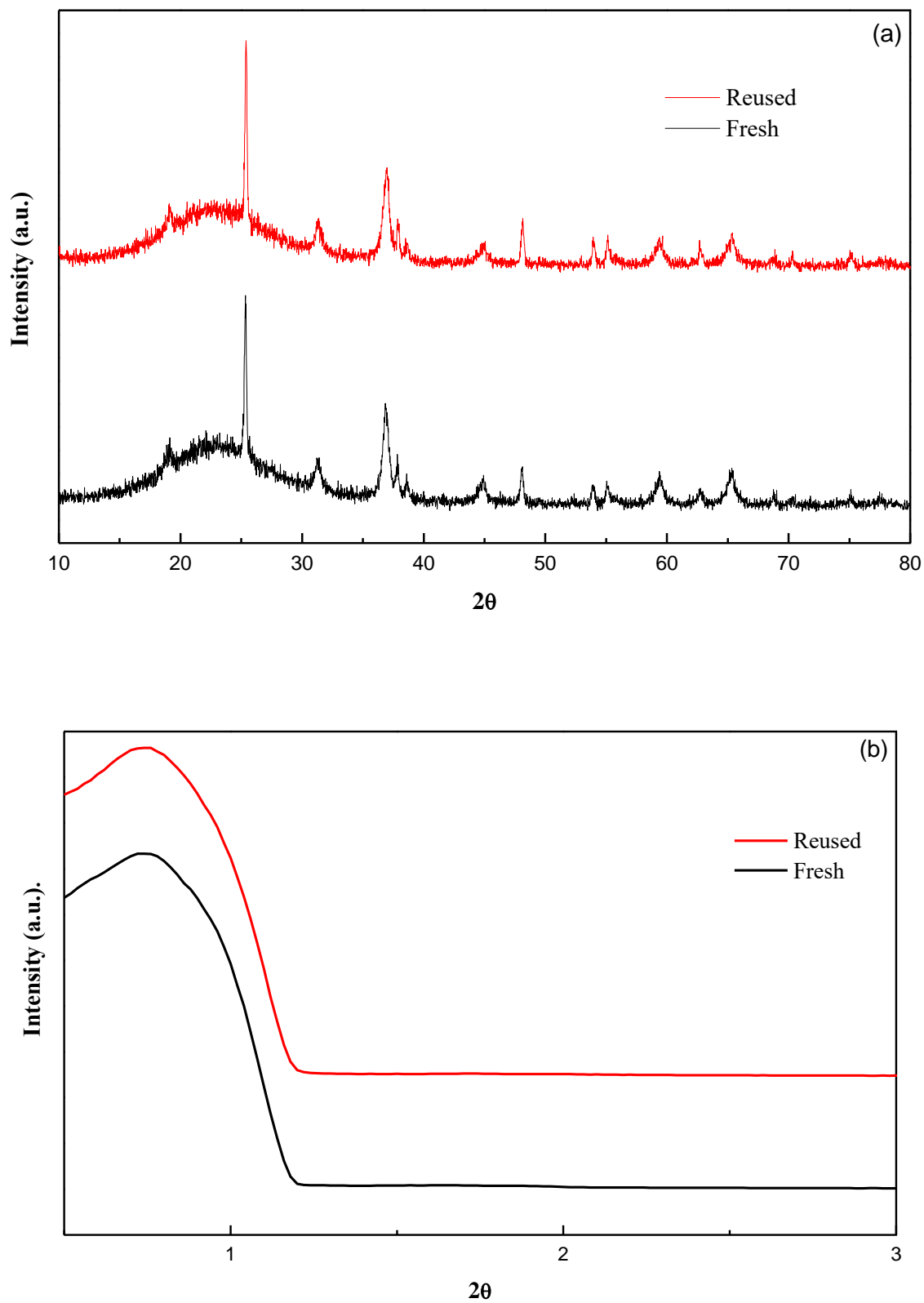


Figure S3. Wide-angle (a) and small-angle (b) XRD patterns of reused Co-Ti-SBA-15.

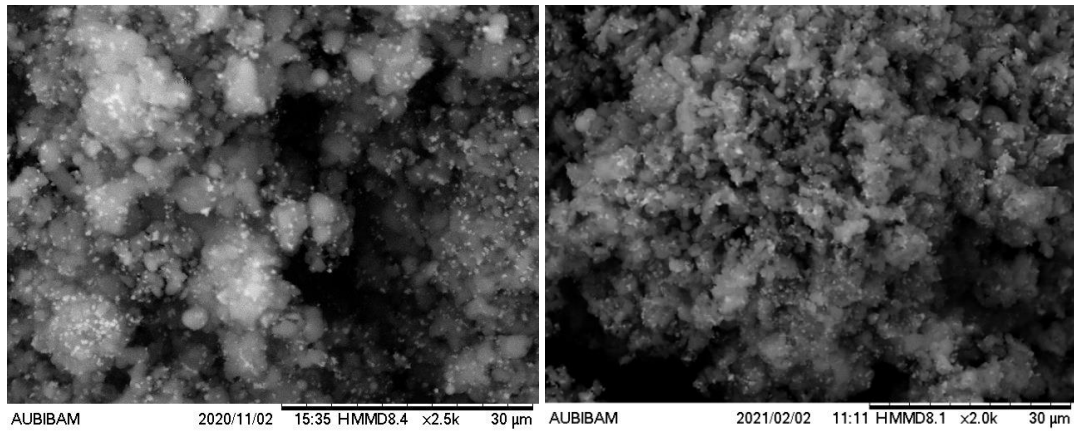


Figure S4. SEM of reused Co-Ti-SBA-15; a) fresh B) reused.

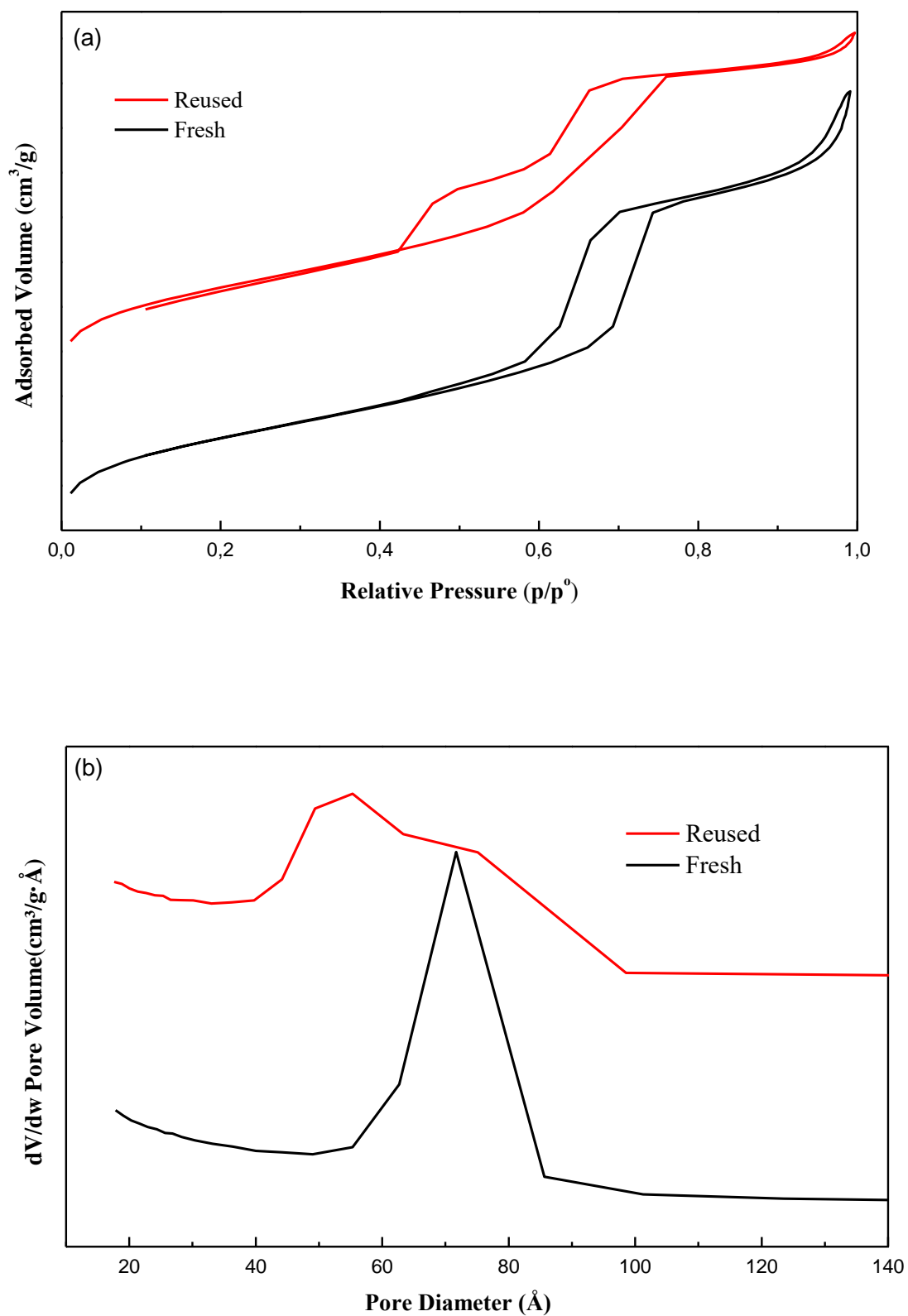


Figure S5. (a) N₂ adsorption-desorption isotherms and (b) pore distributions of reused Co-Ti-SBA-15.