

Mo - V

pH가

LG

pH effect on the catalytic structure and activity in selective acrolein oxidation over Mo-V catalysts

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1943
C1
molybdenum bismuth
vanadium
2
Co - Mo 가
Mo - V
가
Mo - V - O
10 - 15mol% V₂O₅
V₂O₅
MoO₃
]. T. G. Kuznetsova
T. V. Andrushkevich
0.1 - 3mol% V₂O₅
가
0.1 - 9 mol% V₂O₅ Mo - V - O
VMo₃O₁₁
rhombohedral Mo₂O₃ V⁴⁺ solid solution
가
MoO₃ 가
acrylate가 V⁴⁺
1mol% CuO
V⁴⁺, Mo⁶⁺, Cu⁺
가
V. M. Bondareva
Mo - V oxide
H⁺

acrylate type $\text{RCOO}^- \text{H}^+$ Mo-V oxide
 pH가

2. _____
 2.1.

- (1) 300cc 100°C ammonium para tungstate 3.06g, ammonium hepta molybdate 10.59g, ammonium meta vanadate 2.81g
- (2) 90°C copper nitrate 2.46g strontium nitrate 0.63g 가 1 가
- (3) 가 ,
- (4) 100°C 24
- (5) air 450°C 5

2.2.

3/8 inch U-tube oxy/moisture trap
 MFC ,
 가 1/16 inch thermocouple
 recorder 가 on-line G/C
 1

Table 1 Reaction condition

Feed Flow Rate	N ₂	20.5cc/min(46.7 vol%)
	O ₂	4.4cc/min(10vol%)
	N ₂ Acrolein	19cc/min(5vol%, 38.3 vol%)
Saturator Temp.	8°C	
Reaction Temp.	310 -330°C	
Catalyst	Particle Size	100 -200mesh
	weight	0.3g

3. _____

Slurry Slurry
 Cu Sr 가 slurry pH pH
 Fig. 1 pH 4 6
 가 AA yield pH 5 pH 4.5, pH 4, pH
 5.5 가 , pH 6 AA yield
 가 pH
 Slurry pH SEM

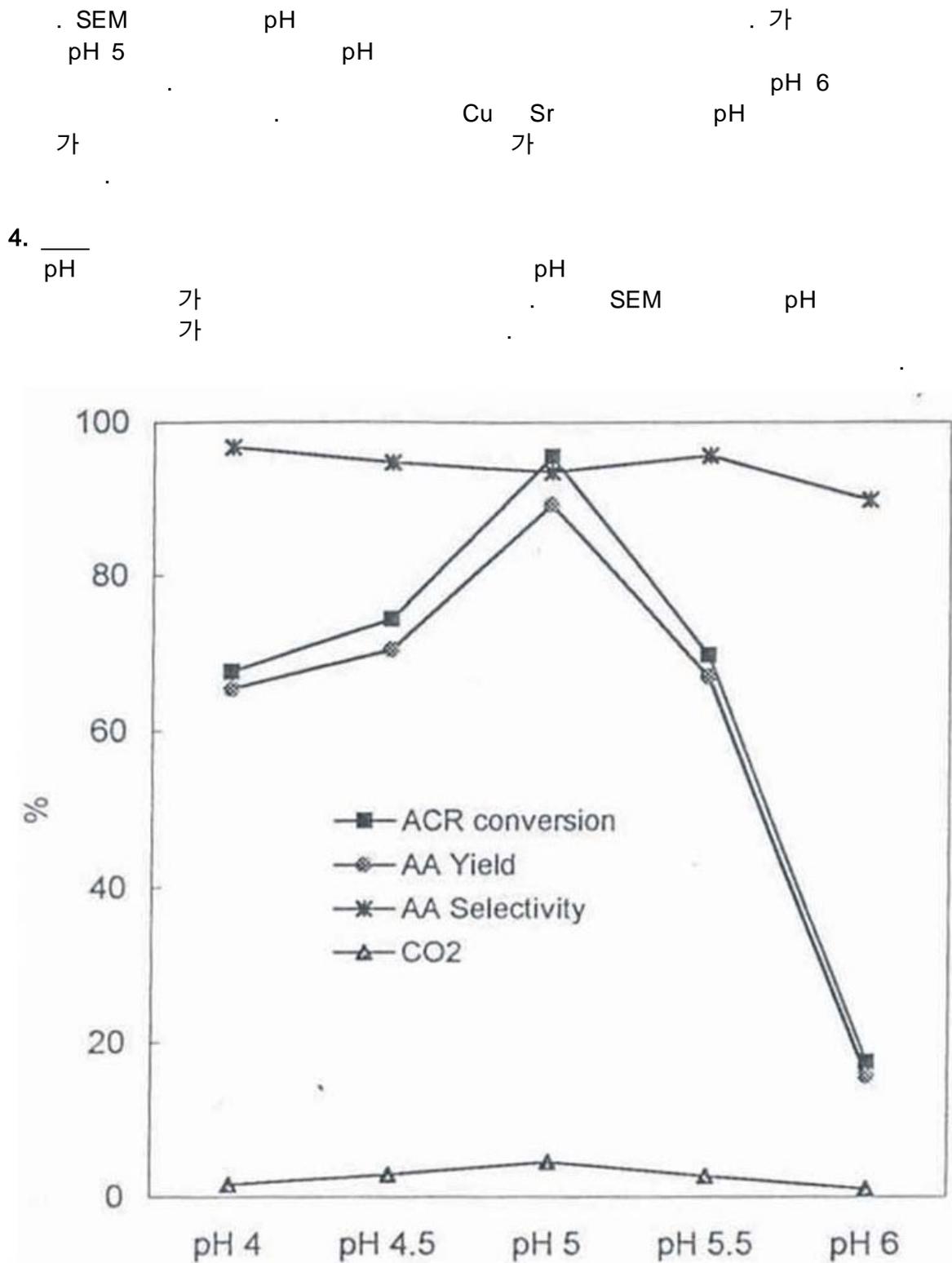


Fig.1. Effects of pH on catalytic performance

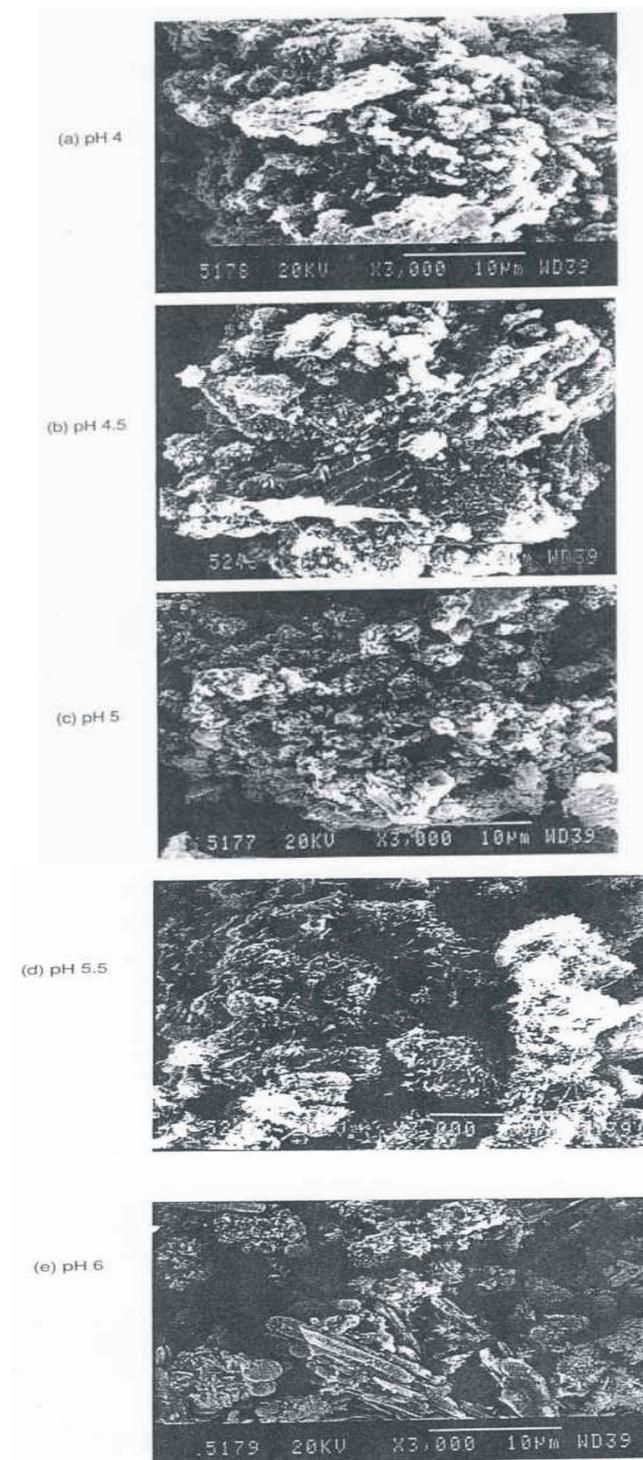


Fig. 2. SEM photographs with pH variation at manufacturing slurry.