

Supplementary Material for
**Ketalization of Glycerol with Acetone to O-heterocyclic Compounds over
 ZrO₂-SiO₂ Solid Acid Catalysts**

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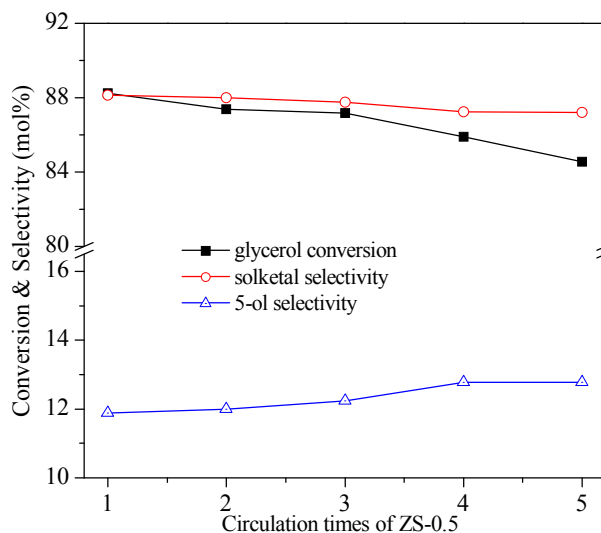


Figure 1S. Results of cycle utilization of ZS-0.5 catalyst in the glycerol ketalization with acetone

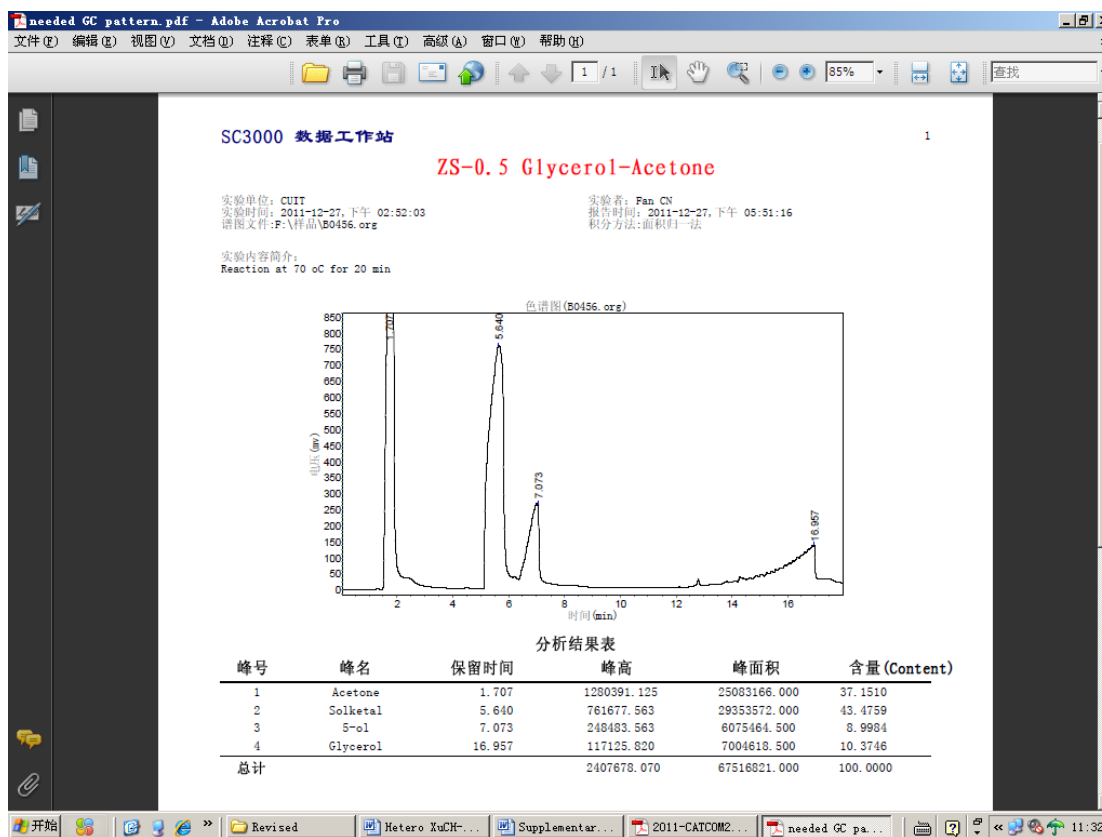


Figure 2S. GC analysis results of liquid samples from glycerol ketalization with acetone over ZS-0.5 at 70 °C for 20 min