

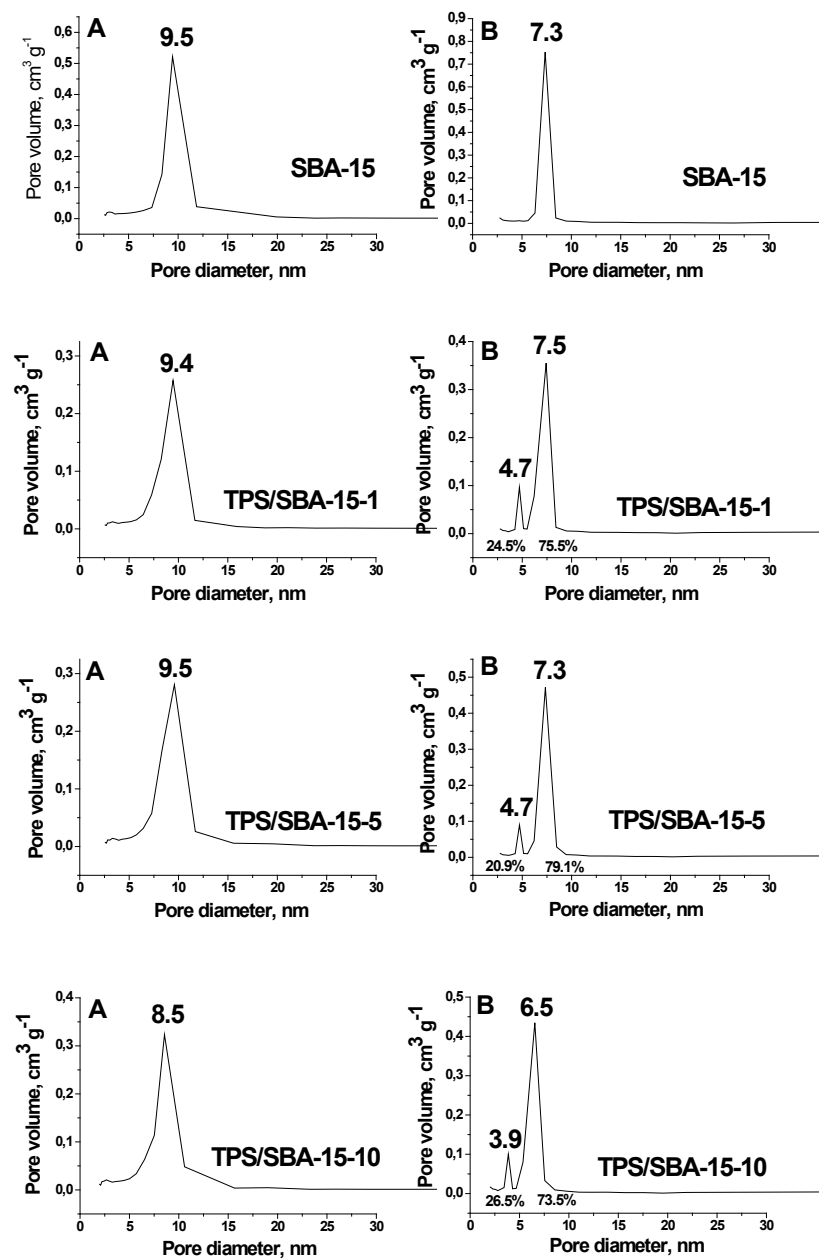
*Supplementary material*

# **Towards Efficient Acidic Catalysts via Optimization of SO<sub>3</sub>H-Organosilane Immobilization on SBA-15 under Increased Pressure: Potential Applications in Gas and Liquid Phase Reactions**

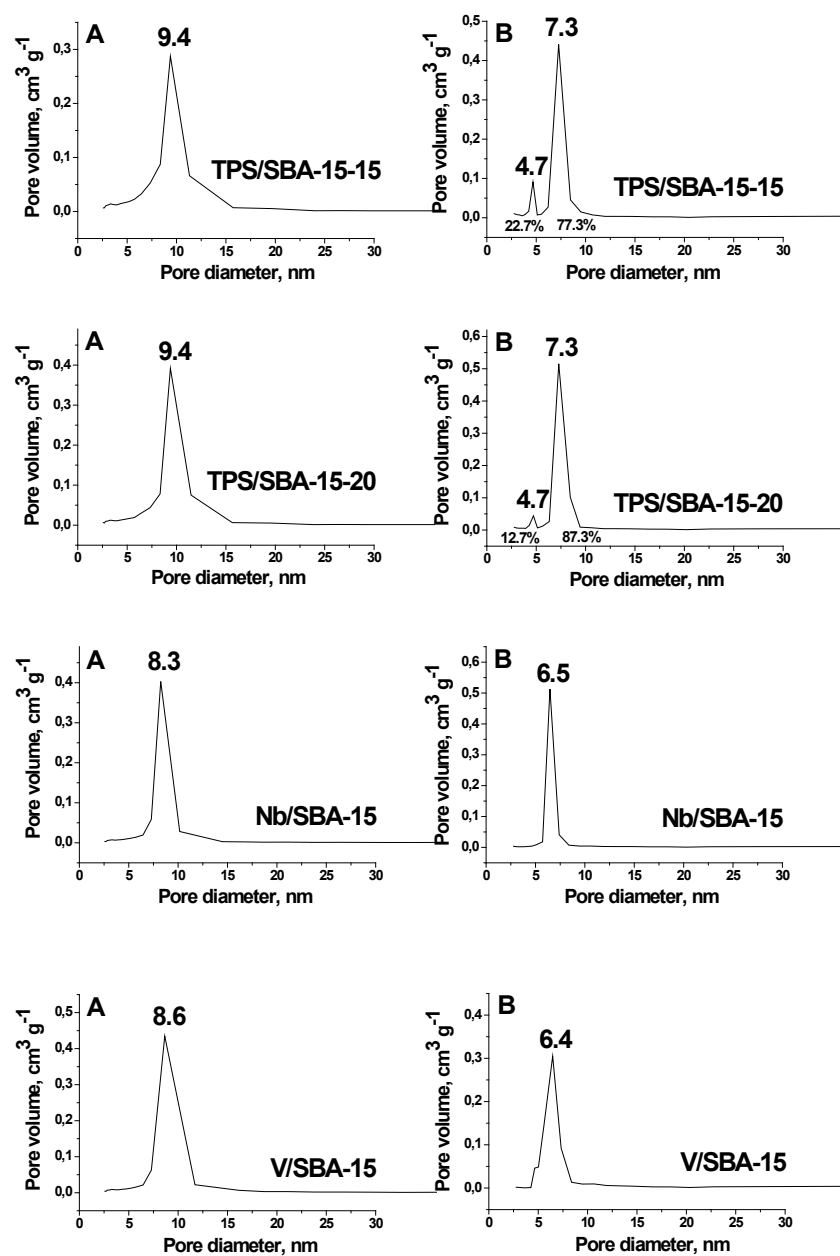
**Maciej Trejda \*, Ada Kaszuba, Ardian Nurwita and Maria Ziolek**

Department of Heterogeneous Catalysis, Faculty of Chemistry, Adam Mickiewicz University, Uniwersytetu Poznańskiego 8, 61-614 Poznań, Poland; ada.jadrzak@wp.eu (A.K.); ardnur@st.amu.edu.pl (A.N.); ziolek@amu.edu.pl (M.Z.)

\* Correspondence: tmaciej@amu.edu.pl



**Figure S1.** Pore size distribution estimated from (A) adsorption and (B) desorption branches of N<sub>2</sub> adsorption/desorption isotherms of SBA-15, TPS/SBA-15-1, TPS/SBA-15-5, TPS/SBA-15-1 materials.



**Figure 2.** Pore size distribution estimated from (A) adsorption and (B) desorption branches of  $N_2$  adsorption/desorption isotherms of SBA-15-15, TPS/SBA-15-20, Nb/SBA-15, V/SBA-15 materials.

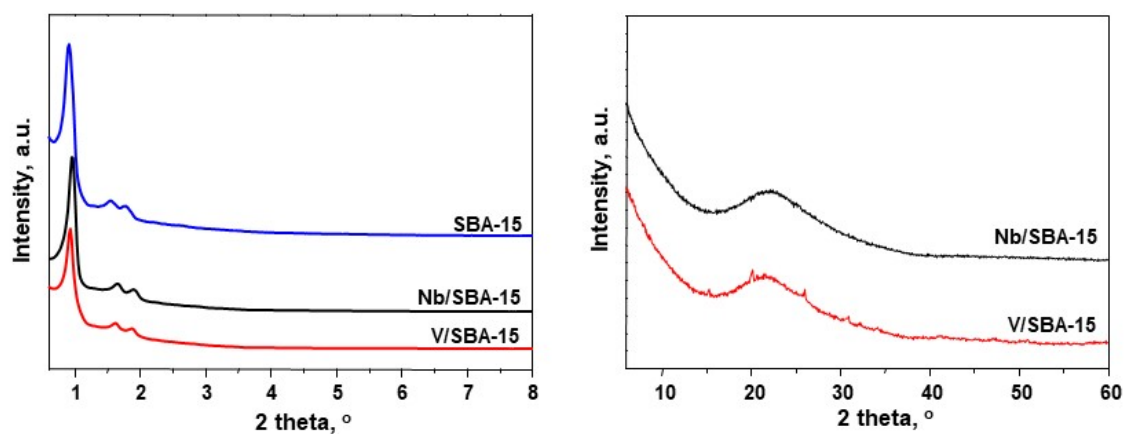


Figure S3. XRD patterns of SBA-15, Nb/SBA-15 and V/SBA-15 samples.

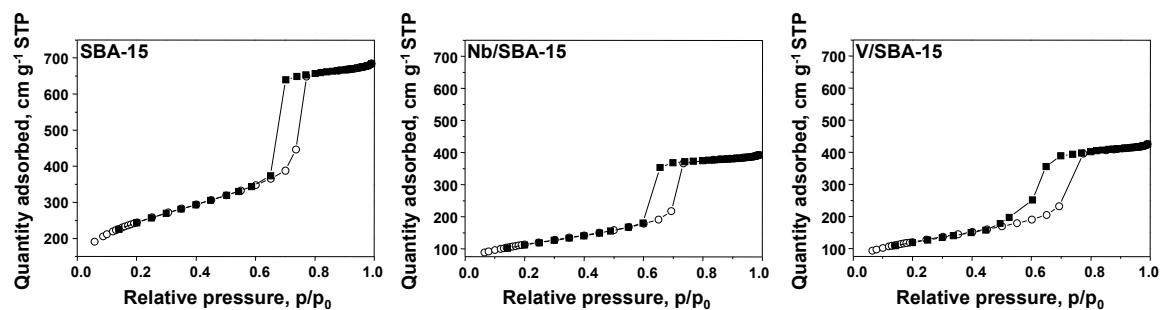
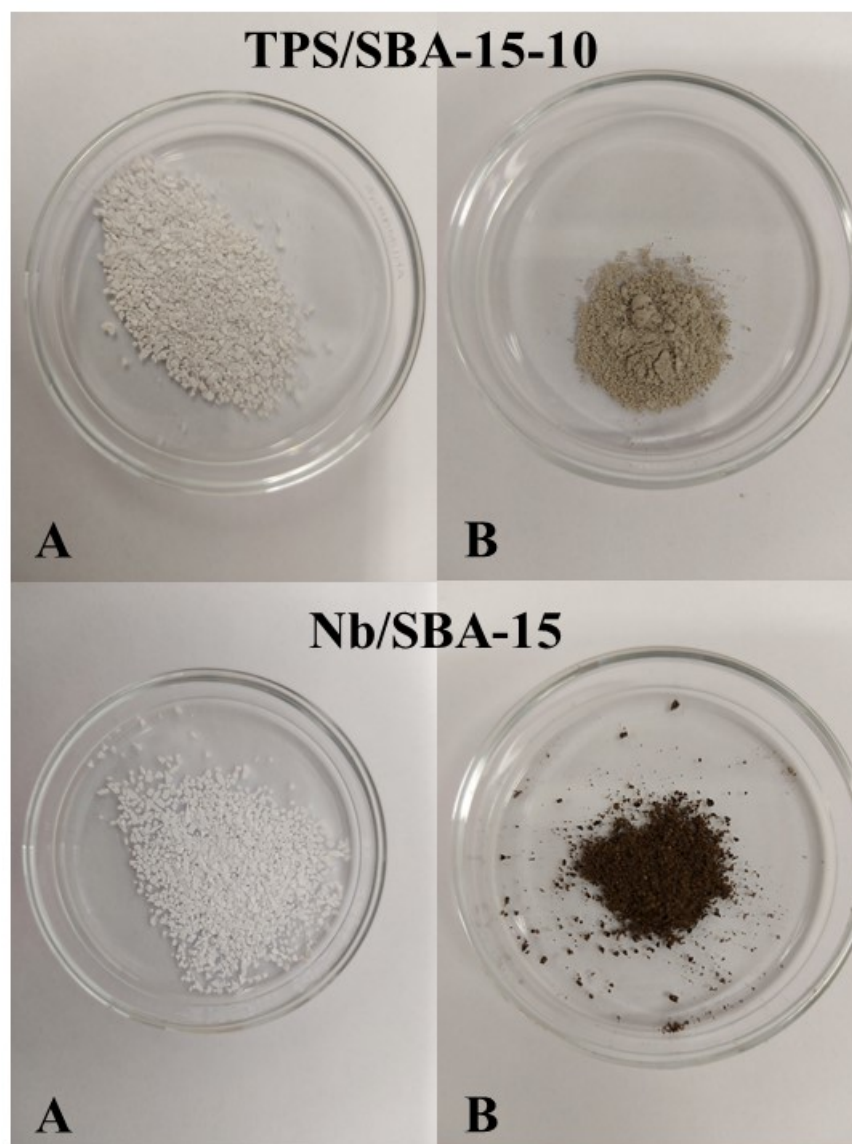


Figure S4.  $N_2$  adsorption/desorption isotherms of SBA-15, Nb/SBA-15 and V/SBA-15 samples.



**Figure S5.** Photos of TPS/SBA-15-10 and Nb/SBA-15 catalysts before (A) and after (B) glycerol dehydration in the presence of oxygen.