

Variation of Metal-Support Interaction with TiO_2 loading and synthesis conditions for Pt-Ti/SBA-15 active catalysts in methane combustion

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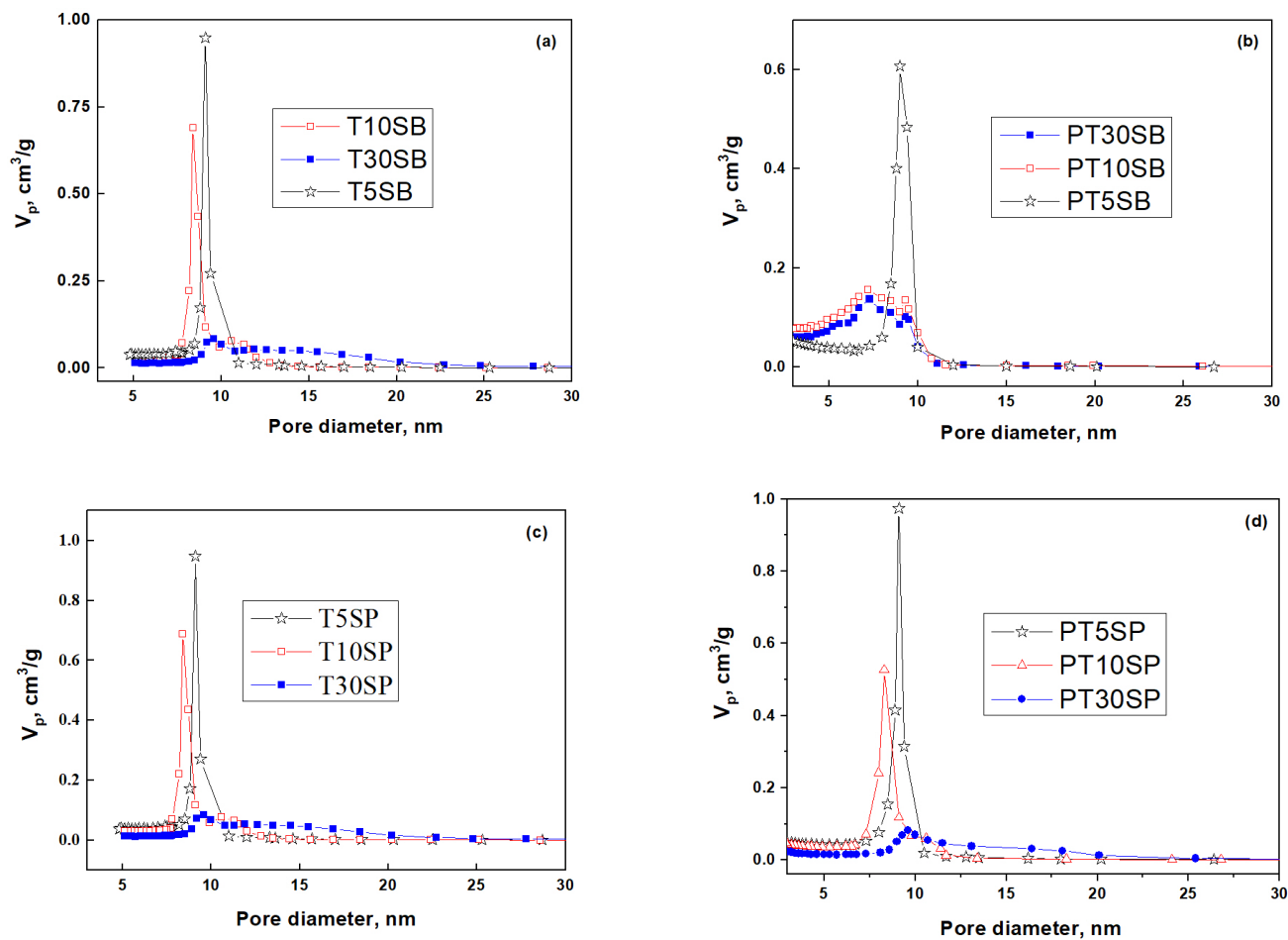


Figure S1. Pore size distribution of the (-/Pt)Ti(5/10/30)SB samples, before (a) and after Pt (b) immobilization on samples obtained with tetrabutylorthotitanate, and the (-/Pt)Ti(5/10/30)SP samples, before (c) and after Pt (d) immobilization on samples obtained with peroxotitanate.

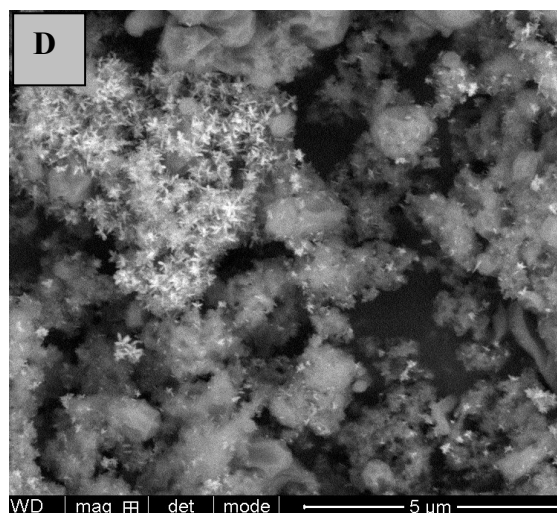
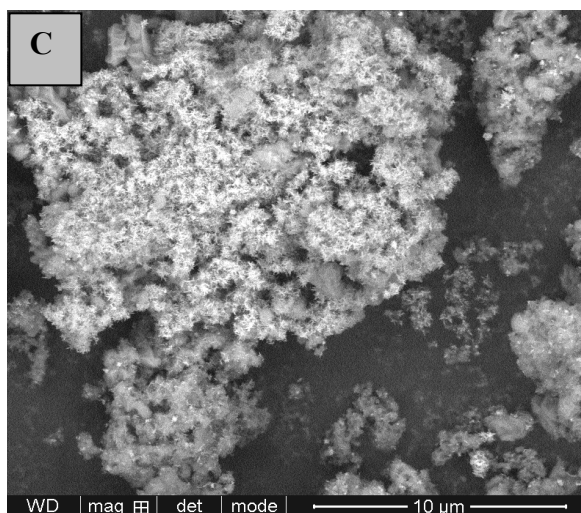
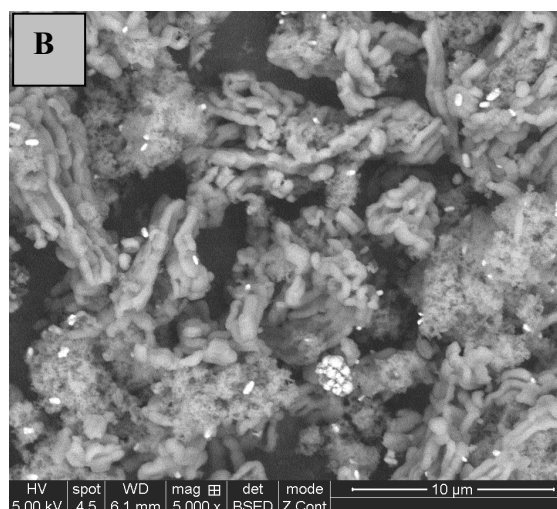
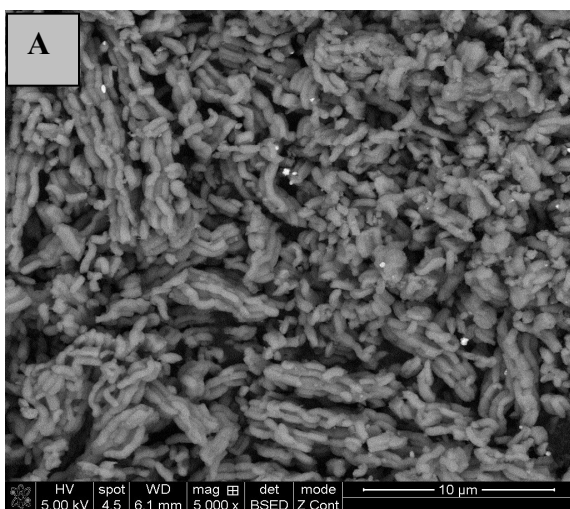
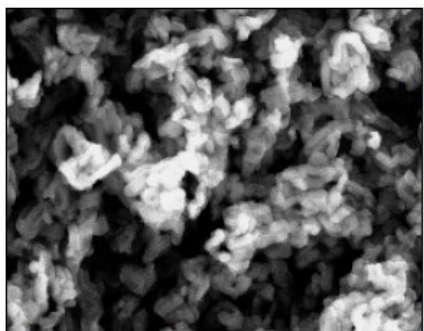
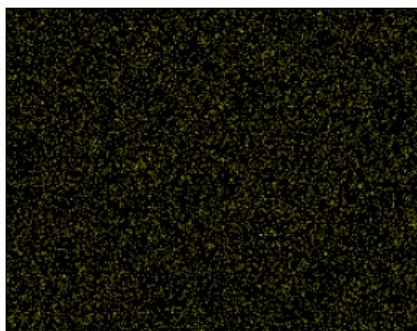


Figure S2. SEM images, recorded using back-scattered electrons (BSE), of PT5SP (A), PT10SP (B) and P30SP (C, D) samples.

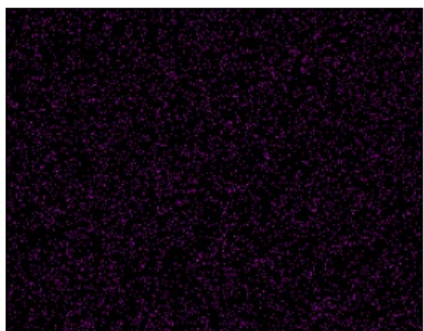
PT1SP



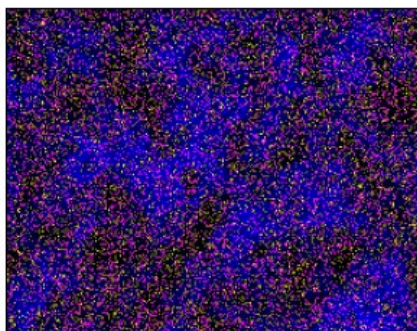
SE1
20000x 1 μm
kV:20.0 Tilt:0



PtM
20000x 1 μm
kV:20.0 Tilt:0

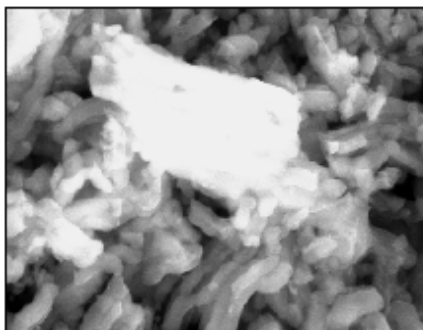


TiK
20000x 1 μm
kV:20.0 Tilt:0

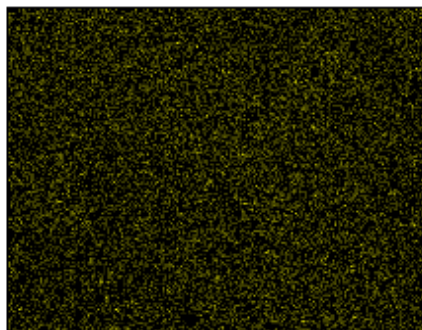


Si Pt Ti
20000x 1 μm

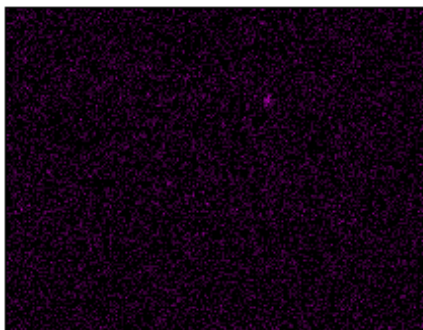
PT5SP



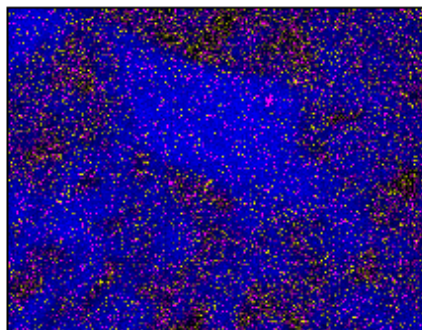
SE1
20000x 1 μm
kV:20.0 Tilt:0



PtM
20000x 1 μm
kV:20.0 Tilt:0

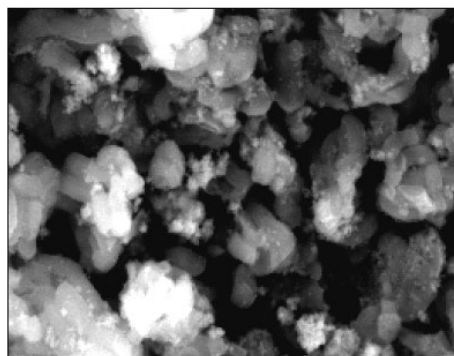


TiK
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kV:20.0 Tilt:0

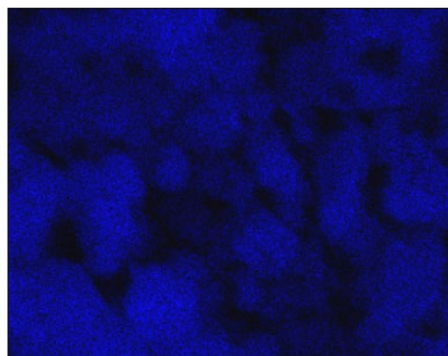


Si Pt Ti
20000x 1 μm

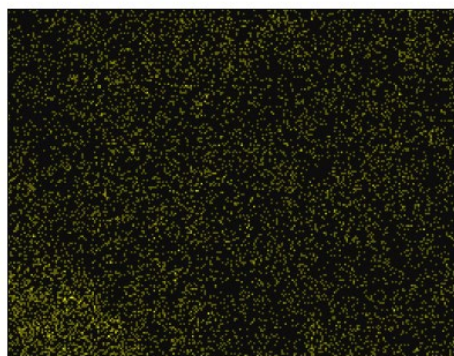
PT10SB



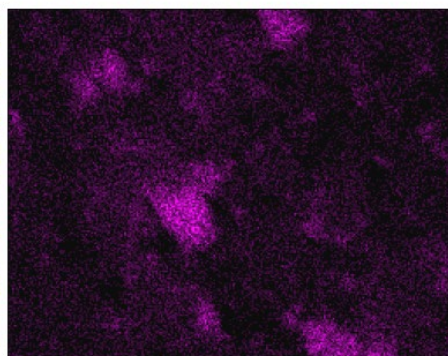
SE1
20000x 1 μm
kV:20.0 Tilt:0



SiK
20000x 1 μm
kV:20.0 Tilt:0

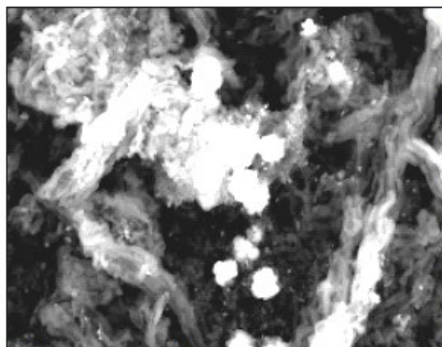


PtM
20000x 1 μm
kV:20.0 Tilt:0

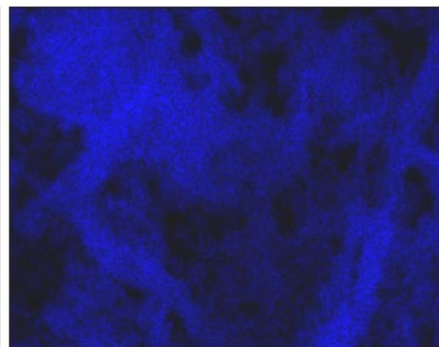


TiK
20000x 1 μm
kV:20.0 Tilt:0

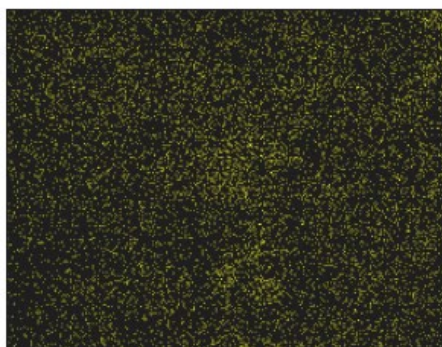
PT10SP



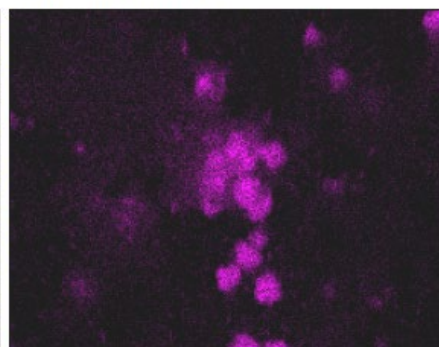
SE1
8000x 5 μm
kV:20.0 Tilt:0



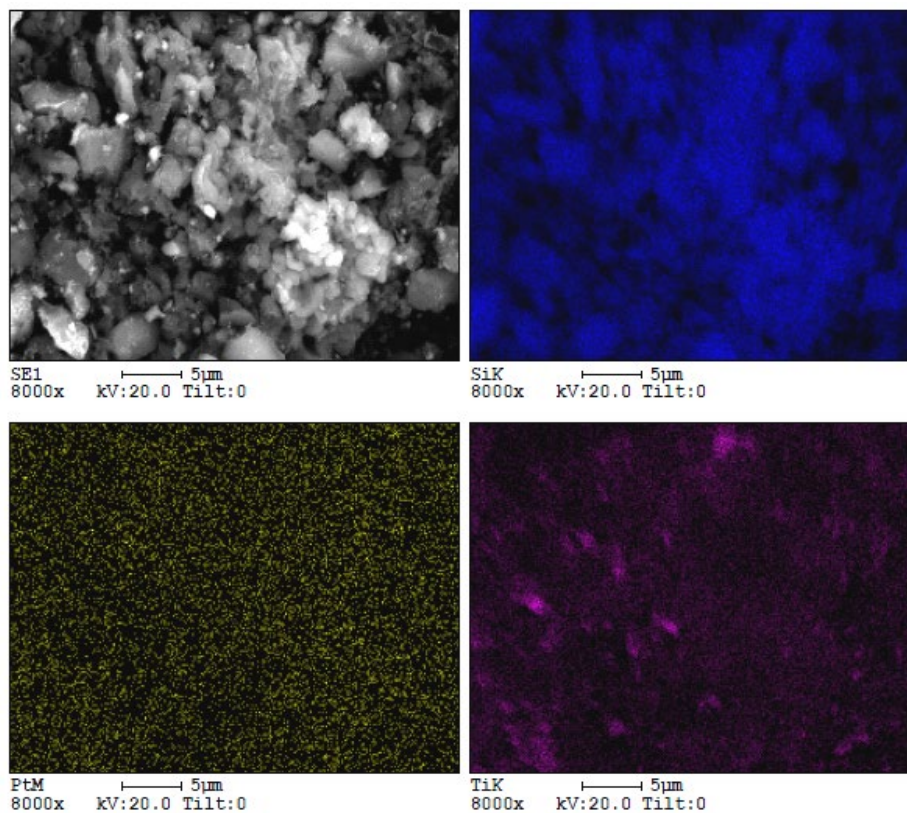
SiK
8000x 5 μm
kV:20.0 Tilt:0



PtM
8000x 5 μm
kV:20.0 Tilt:0



TiK
8000x 5 μm
kV:20.0 Tilt:0



PT30SB

Figure S3. Elemental mapping images obtained by SEM.

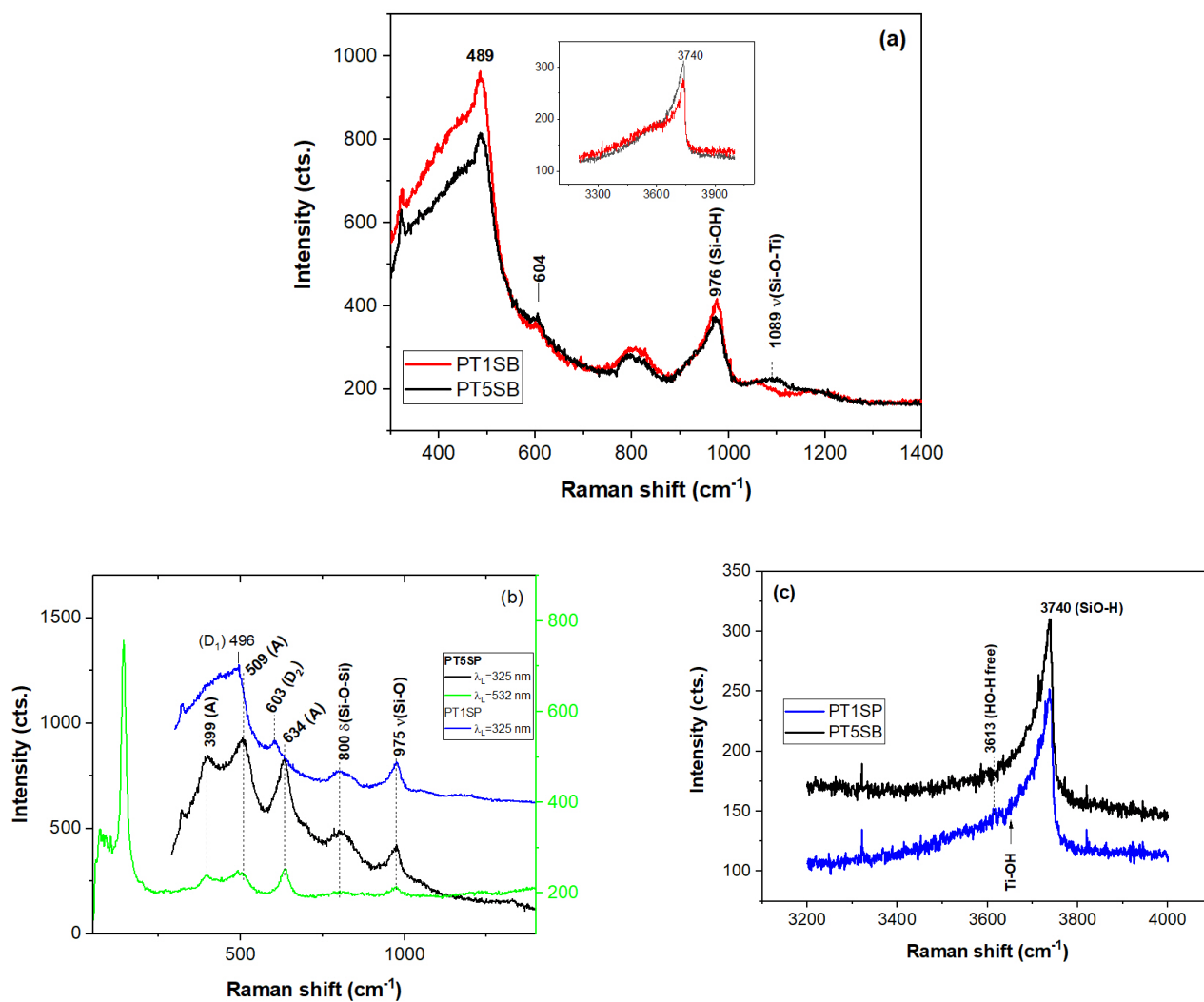


Figure S4. UV-Raman spectra of the PT(1/5)SB (a) and PT(1/5)SP (b,c) (A and R stand for anatase and Rutile). The Vis-Raman spectrum of the PT5SP was used for comparison.

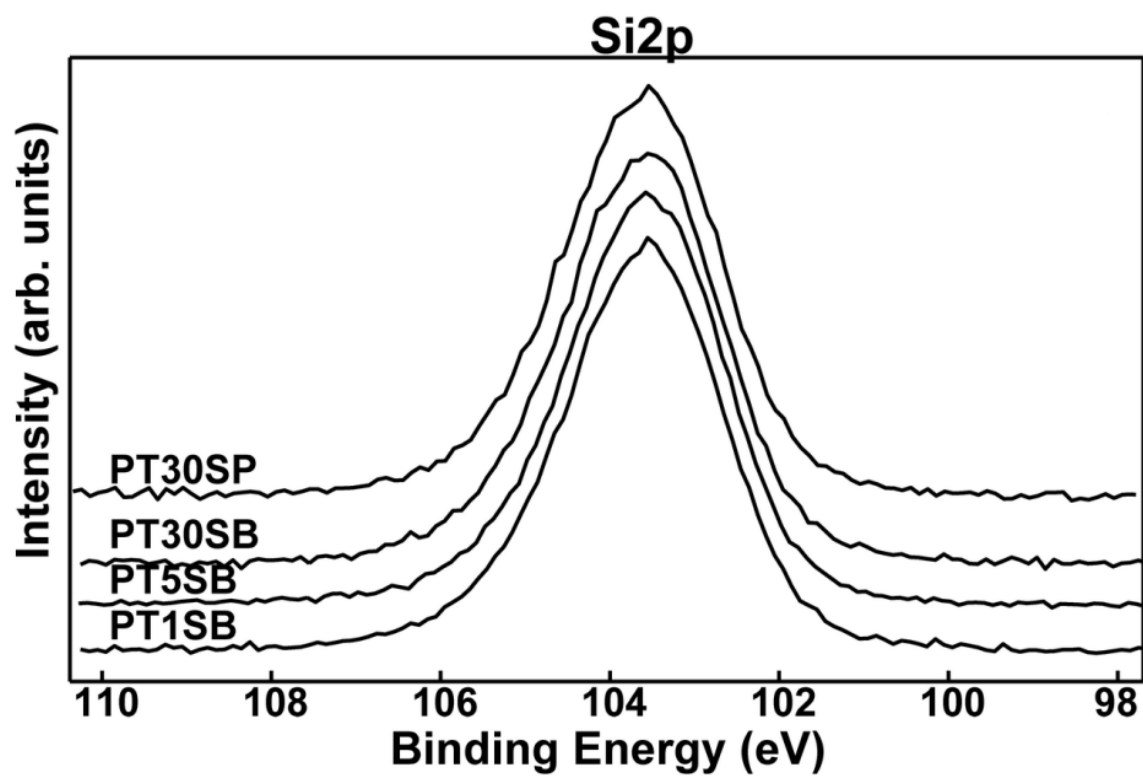


Figure S5. The XPS photoelectron spectra of the Si2p, superimposed spectra for PT1SB, PT5SB, PT30SB and PT30SP.