

Supplementary Data

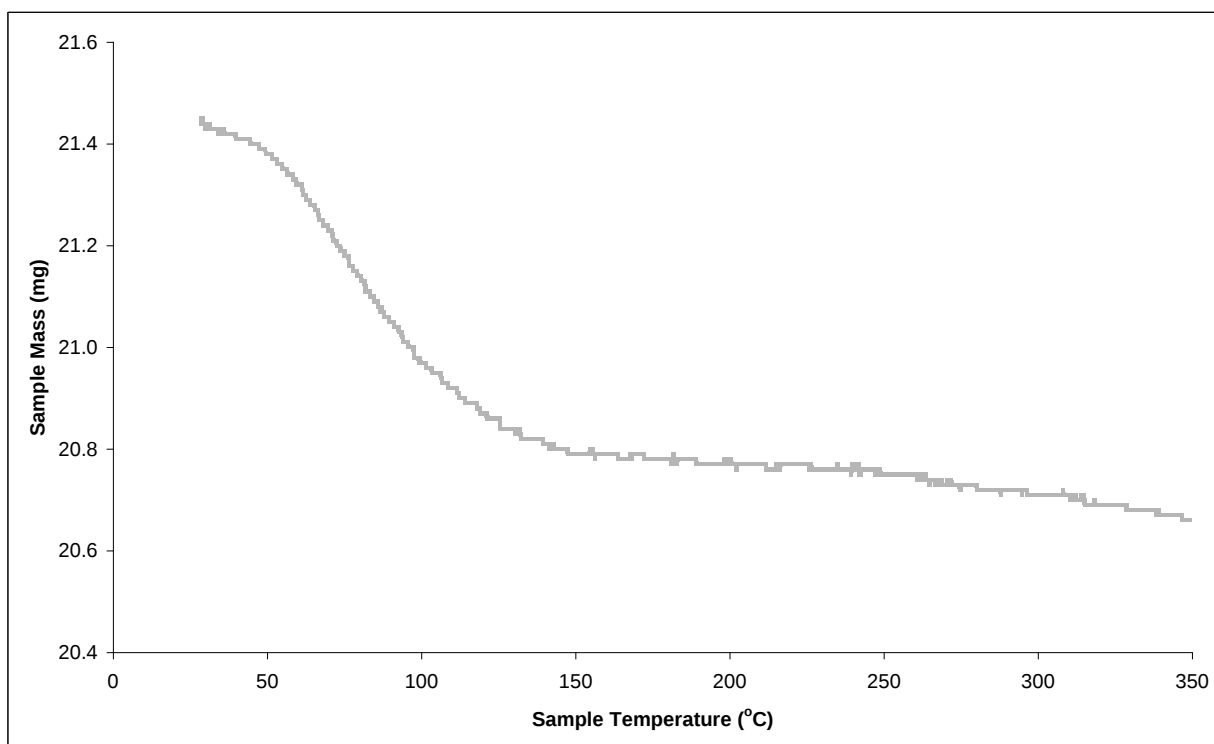
Effect of acid pre-treatment on AuPd/SiO₂ catalysts for the direct synthesis of hydrogen peroxide

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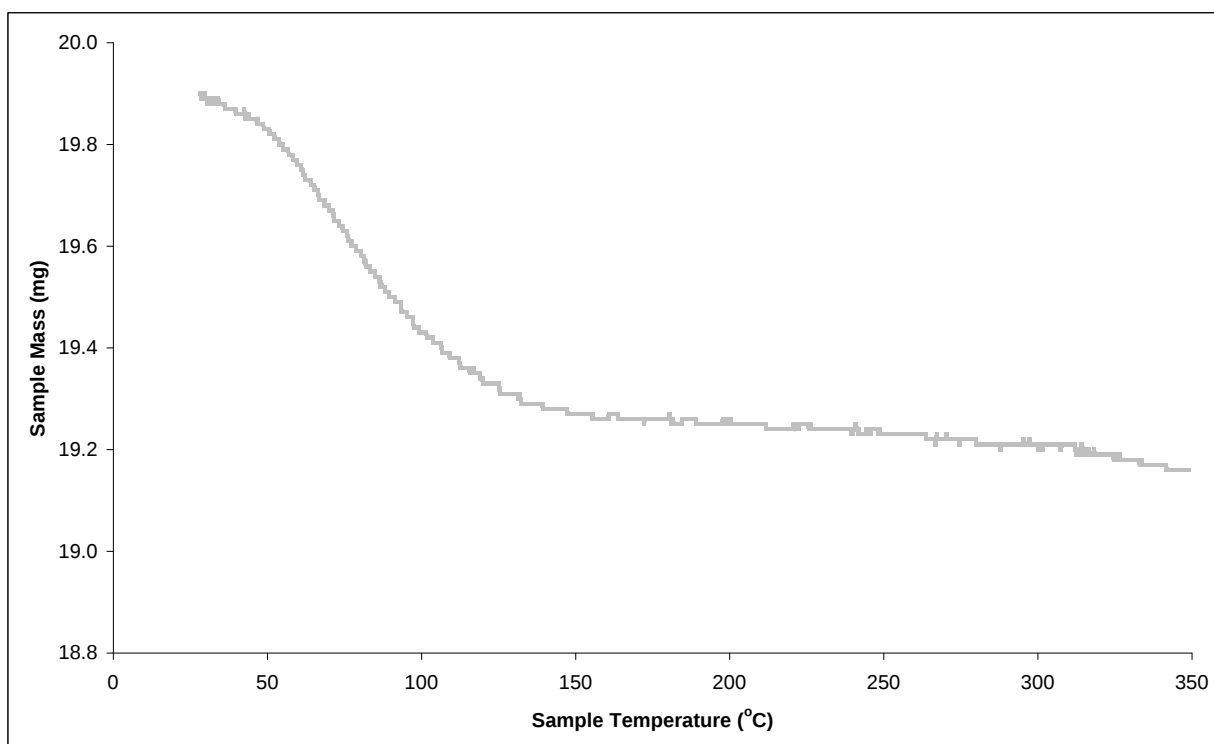
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Supplementary Figure 1. Thermogravimetric analysis profile for the untreated SiO₂ support.



Supplementary Figure 2. Thermogravimetric analysis profile for 2% HNO₃ pre-treated SiO₂ support.

Catalyst	SiO ₂ source	SiO ₂ Pre-treatment	
		Untreated (mol _{H2O2} kg _{cat} ⁻¹ hr ⁻¹)	2% HNO ₃ (mol _{H2O2} kg _{cat} ⁻¹ hr ⁻¹)
2.5%Au /SiO ₂	Johnson Matthey	0.4	1
2.5%Au-2.5%Pd/SiO ₂	Johnson Matthey	40	140
2.5%Pd/SiO ₂	Johnson Matthey	56	68
2.5%Au /SiO ₂	Grace	1	1.5
2.5%Au-2.5%Pd/SiO ₂	Grace	108	185
2.5%Pd/SiO ₂	Grace	80	108
2.5%Au /SiO ₂	Degussa	4	4.2
2.5%Au-2.5%Pd/SiO ₂	Degussa	135	200
2.5%Pd/SiO ₂	Degussa	130	155

Supplementary Table 1 Au, Pd and AuPd catalysts supported on differnt SiO₂ and acid pre-treated SiO₂ supports