

SUPPORTING INFORMATION

Spectral and Mechanistic Investigation of Oxidative Decarboxylation of Phenylsulfinylacetic Acid by Cr(VI)

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(Received September 3, 2013; Accepted January 16, 2014)

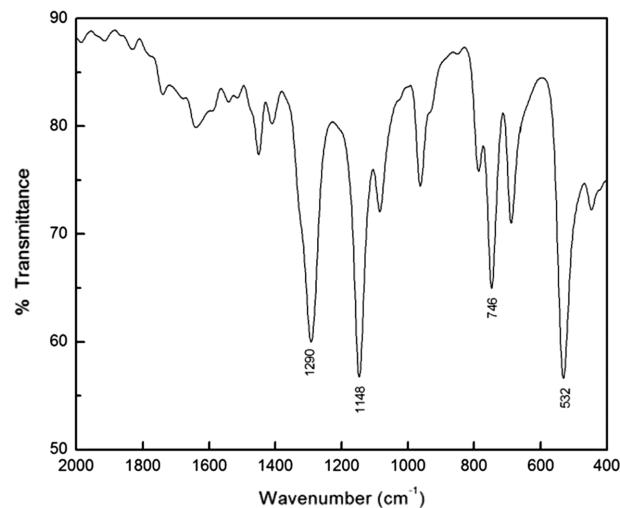


Figure S1. IR spectrum of the product.

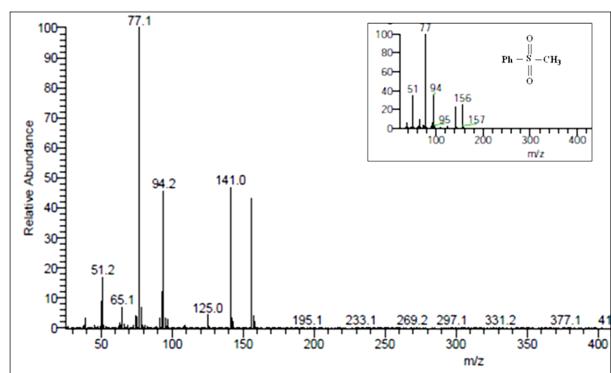


Figure S2. GC-MS spectrogram of the product.

Table S1. Effect of solvent, $[H^+]$ and ionic strength on the oxidative decarboxylation reaction at 30 °C

% CH ₃ CN – % H ₂ O (v/v)	$10^4 k_1^a (s^{-1})$	$10^1 [H^+] (\text{mol dm}^{-3})$	$10^4 k_1^b (s^{-1})$	I (mol dm^{-3})	$10^4 k_1^c (s^{-1})$
10 – 90	5.89 ± 0.11	1.00	1.24 ± 0.02	0.80	7.42 ± 0.12
20 – 80	7.42 ± 0.12	2.50	3.22 ± 0.13	1.00	7.80 ± 0.18
30 – 70	8.07 ± 0.15	5.00	6.18 ± 0.13	1.20	8.14 ± 0.31
40 – 60	9.33 ± 0.20	7.50	9.87 ± 0.20	1.40	8.80 ± 0.22
50 – 50	11.2 ± 0.23	10.0	12.5 ± 0.30	1.55	9.87 ± 0.20
60 – 40	13.3 ± 0.18	12.5	15.3 ± 0.37	1.80	10.2 ± 0.17
70 – 30	17.7 ± 0.39	15.0	18.0 ± 0.47		
80 – 20	26.3 ± 0.96				
90 – 10	38.7 ± 1.40				

$[\text{PSAA}] = 5.0 \times 10^{-2} \text{ mol dm}^{-3}$; $[\text{Cr(VI)}] = 3.0 \times 10^{-4} \text{ mol dm}^{-3}$; ^{a,c} $[\text{H}^+] = 0.75 \text{ mol dm}^{-3}$; ^a $I = 0.8 \text{ mol dm}^{-3}$; ^b $I = 1.55 \text{ mol dm}^{-3}$; ^{b,c} $\text{CH}_3\text{CN}-\text{H}_2\text{O}$ (20–80%, v/v).