

Electronic Supplementary Material

Time Dependent Stereoselective Heck Reaction using Mesoporous Pd/TiO₂ nanoparticles catalyst under Sunlight

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Figure S2 SEM micrographs of Pd doped titania mesoporous materials

Figure S3 EDS report of Pd doped titania mesoporous materials

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Figure S8 ¹H and ¹³C NMR of Z-tert-butyl 3-(4-methoxyphenyl)acrylate

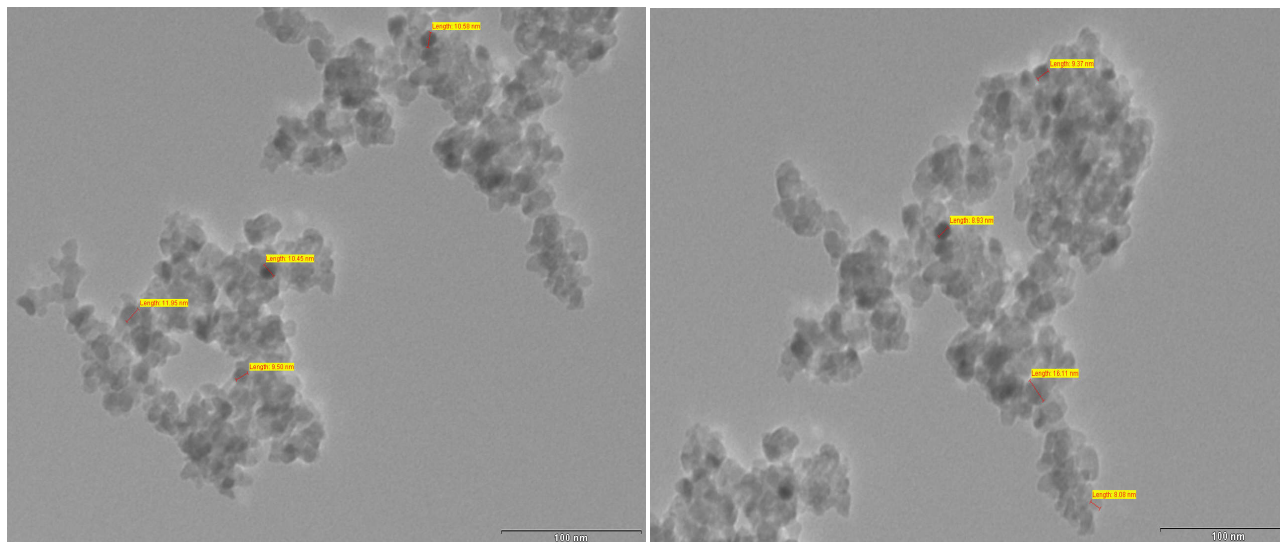


Figure S1 TEM micrographs of Pd doped titania mesoporous materials

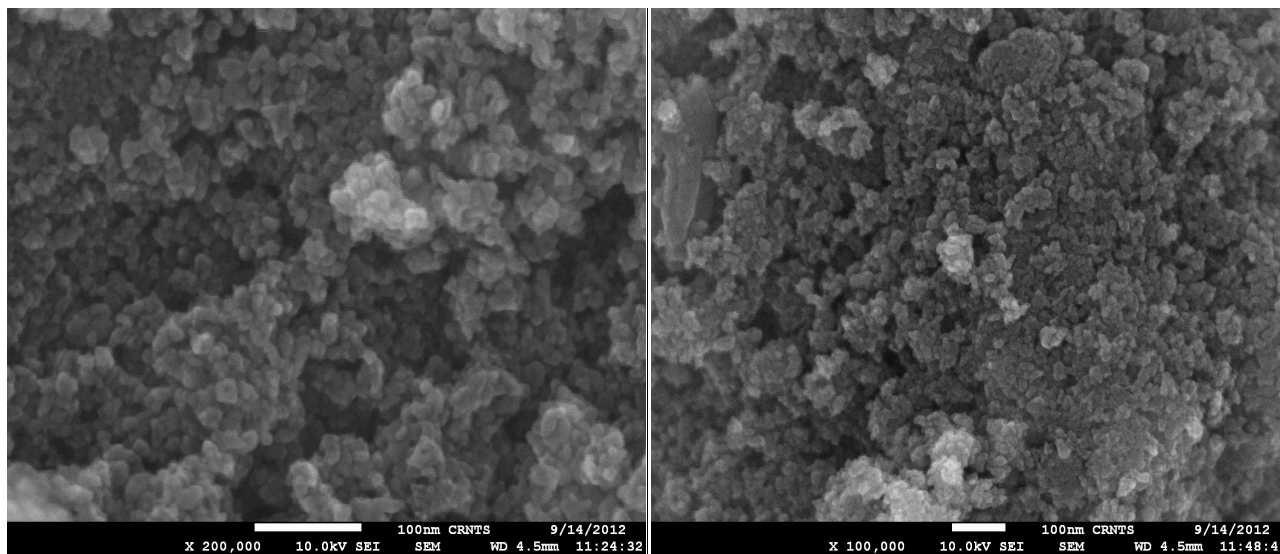


Figure S2 SEM micrographs of Pd doped titania mesoporous materials

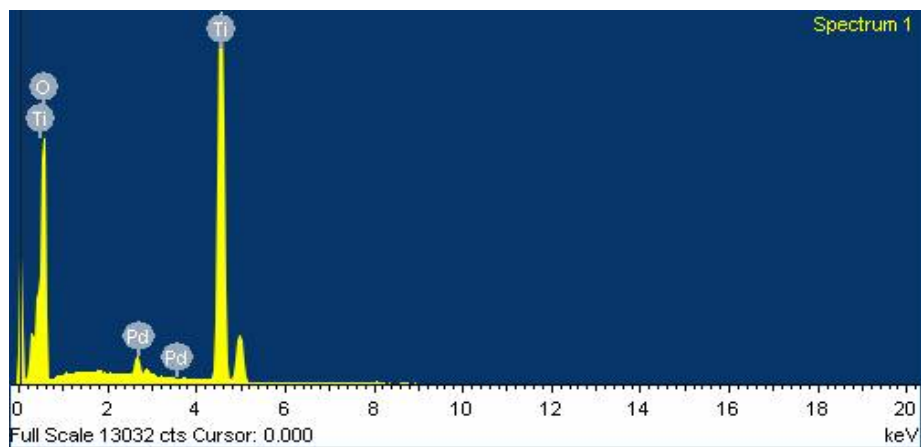


Figure S3 EDS report of Pd doped titania mesoporous materials

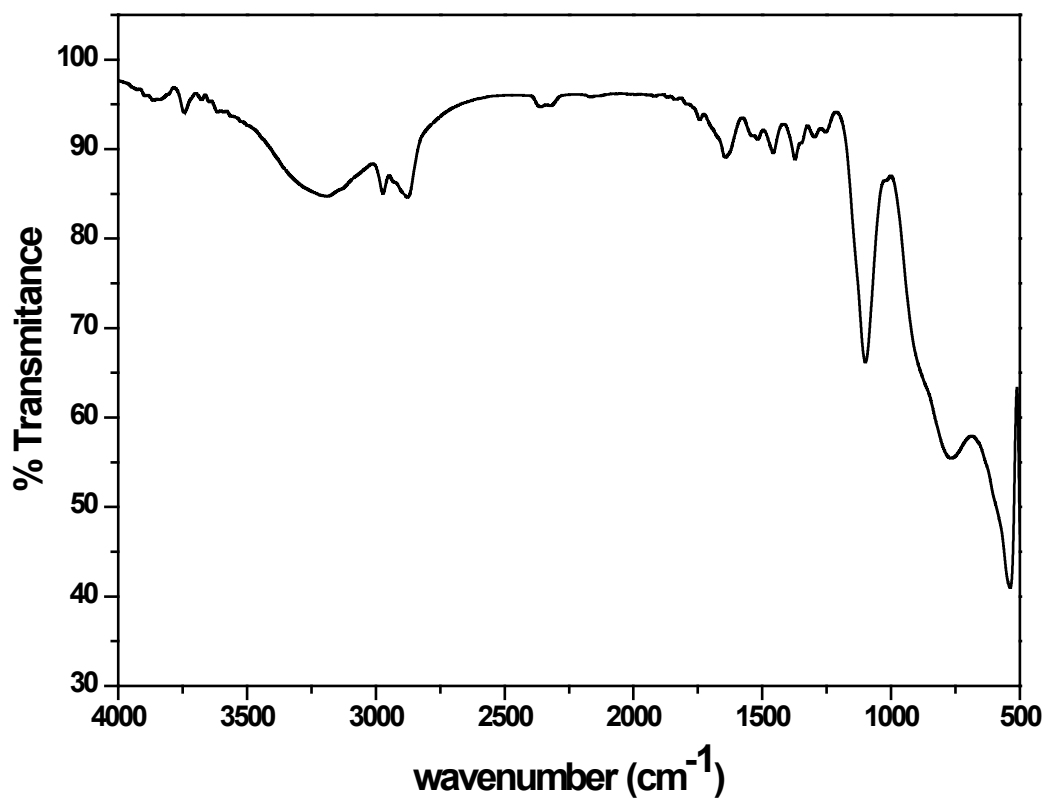
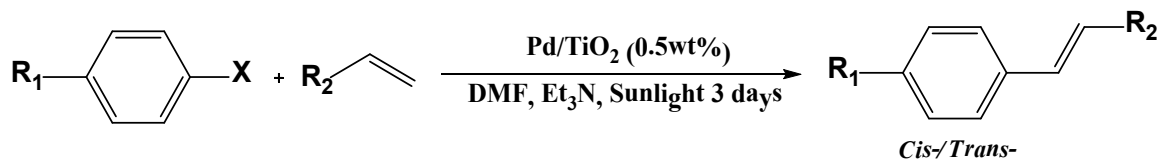


Figure S4 FTIR spectra of Pd doped titania mesoporous materials

Table S1 The Heck Coupling reactions of Aryl halides with Alkenes^a

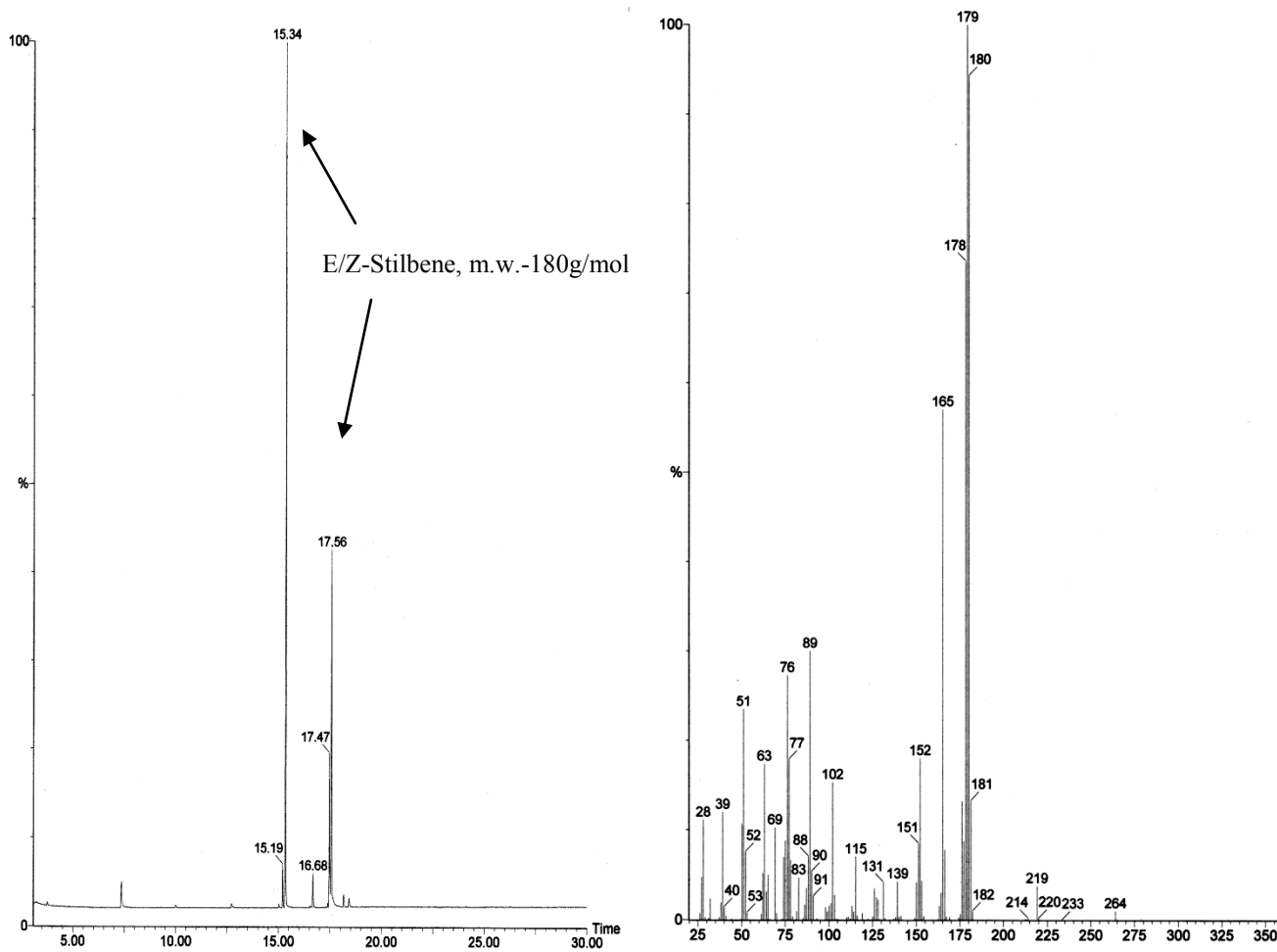


Entry	R ₁	R ₂	X
1	-H	-C ₆ H ₅	I
2	-OCH ₃	-C ₆ H ₅	I
3	-COOH	-C ₆ H ₅	I
4	-H	-C ₆ H ₅	Br
5	-COOH	-C ₆ H ₅	Br
6	-H	-CO ₂ C ₄ H _{9-t}	Br
7	-H	-CO ₂ C ₄ H _{9-t}	I
8	-COOH	-CO ₂ C ₄ H _{9-t}	I
9	-OCH ₃	-CO ₂ C ₄ H _{9-t}	I

^a Reaction conditions- Aryl halides (1.28mmol), Alkenes (1.66mmol), Triethylamine (2.56mmol), Dodecane (40mg, as internal standard), Pd/TiO₂ (0.5 wt% of Pd) and DMF (5ml) under sunlight for 3 days at ~45°C.

Characterization of Heck Coupling product

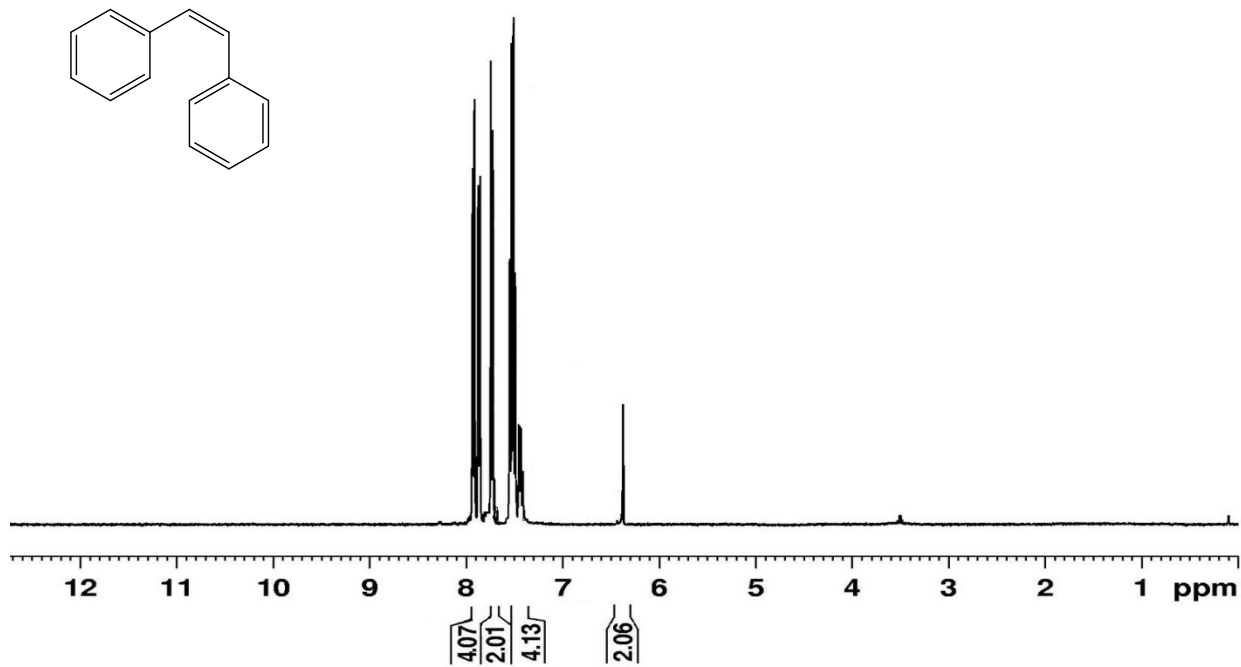
Figure S5 GC-MS spectra of 1,2-diphenylethene (Stilbene)



Characterization of few representative Heck coupling products

Figure S6 ^1H and ^{13}C NMR of Z-1,2-diphenylethene (Stilbene)

^1H NMR



^{13}C NMR

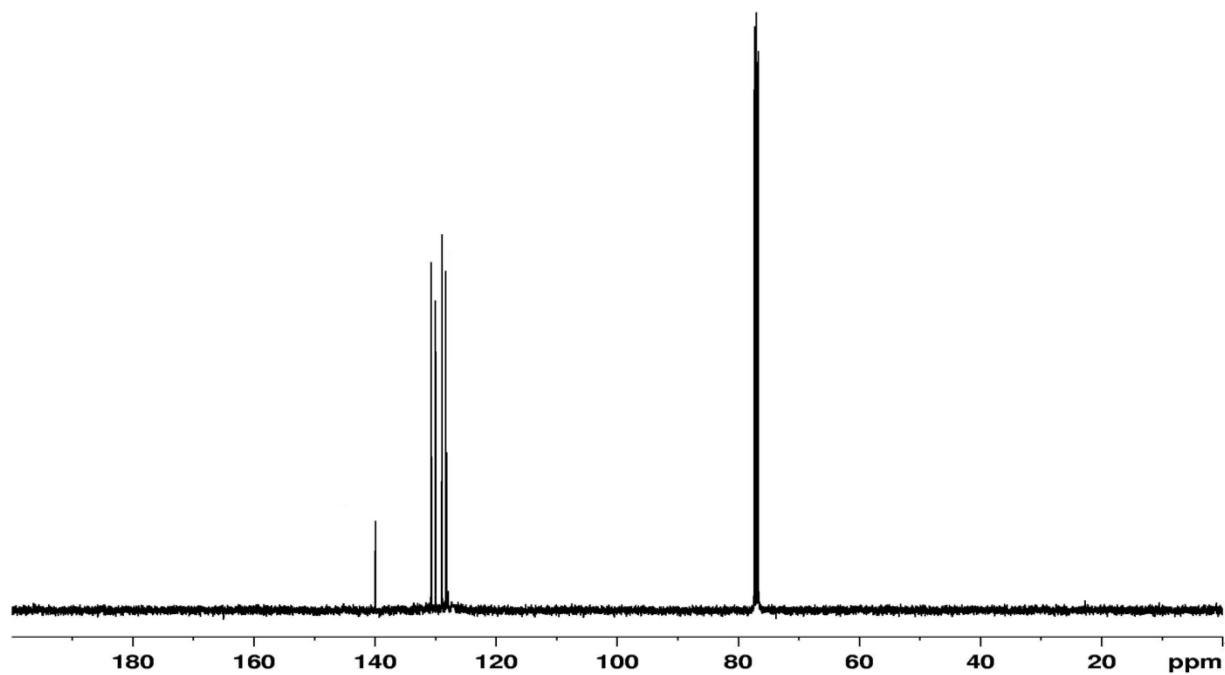
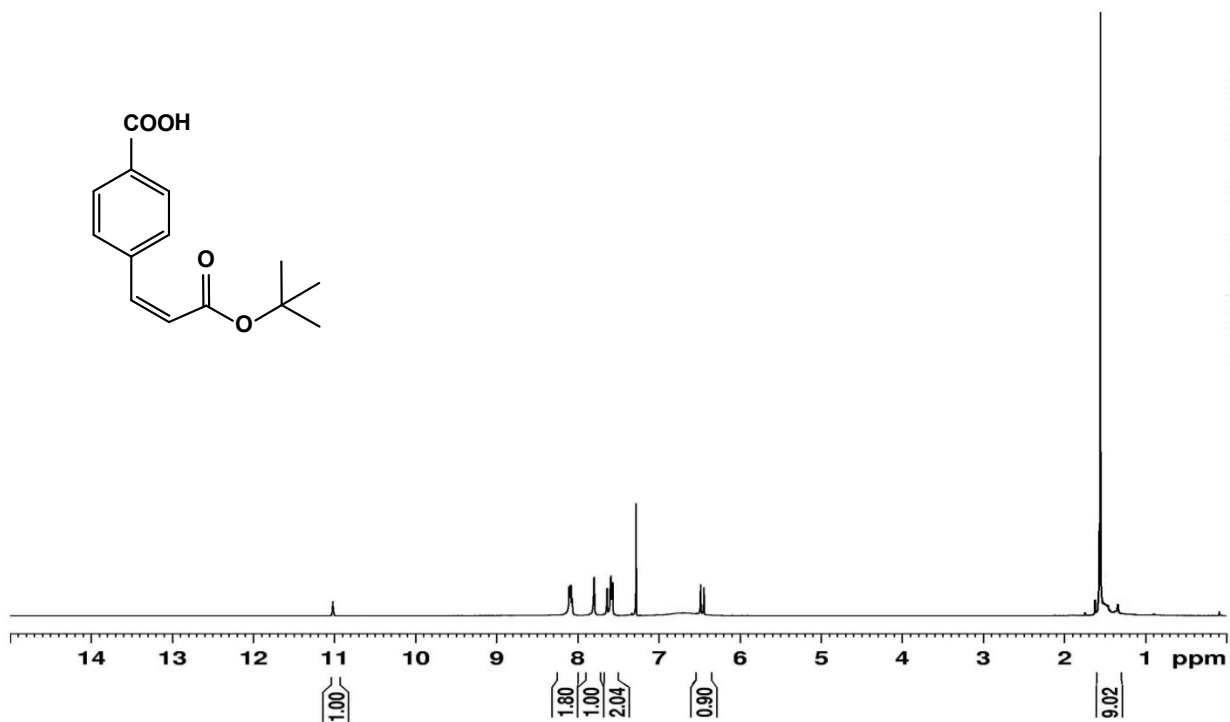


Figure S7 ^1H and ^{13}C NMR of Z-4-(3-tert-butoxy-3-oxoprop-1-enyl)benzoic acid

^1H NMR



^{13}C NMR

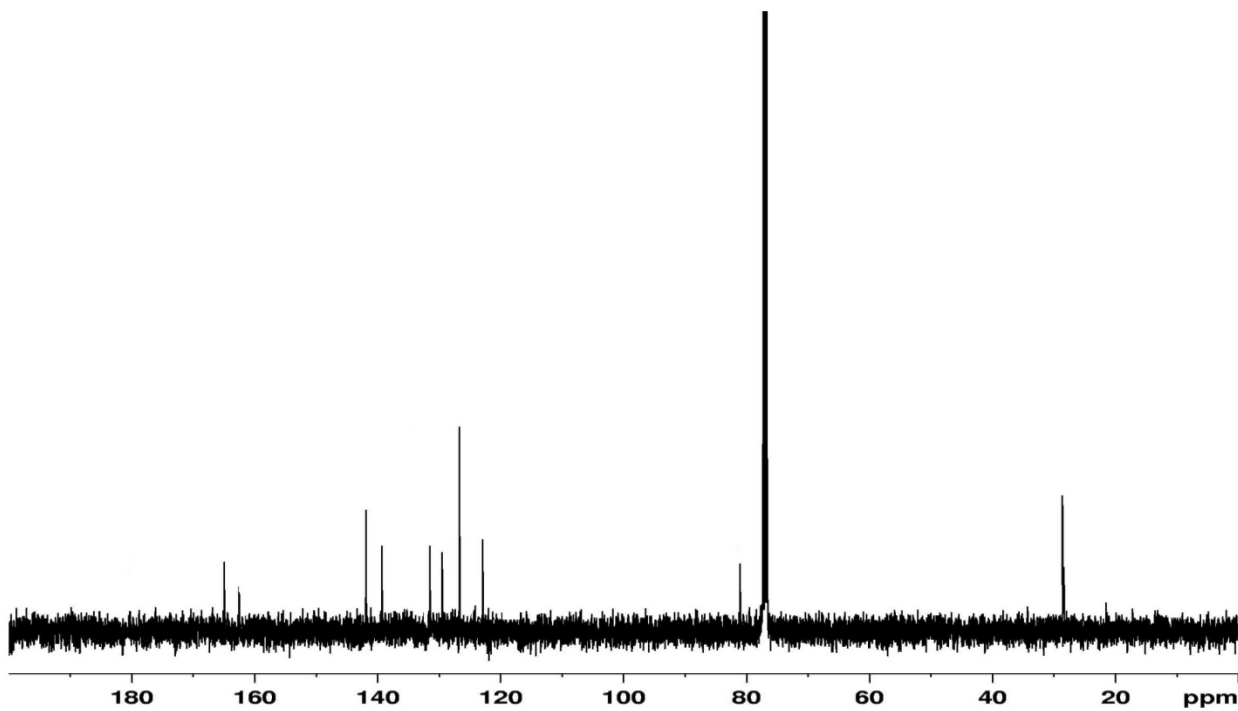
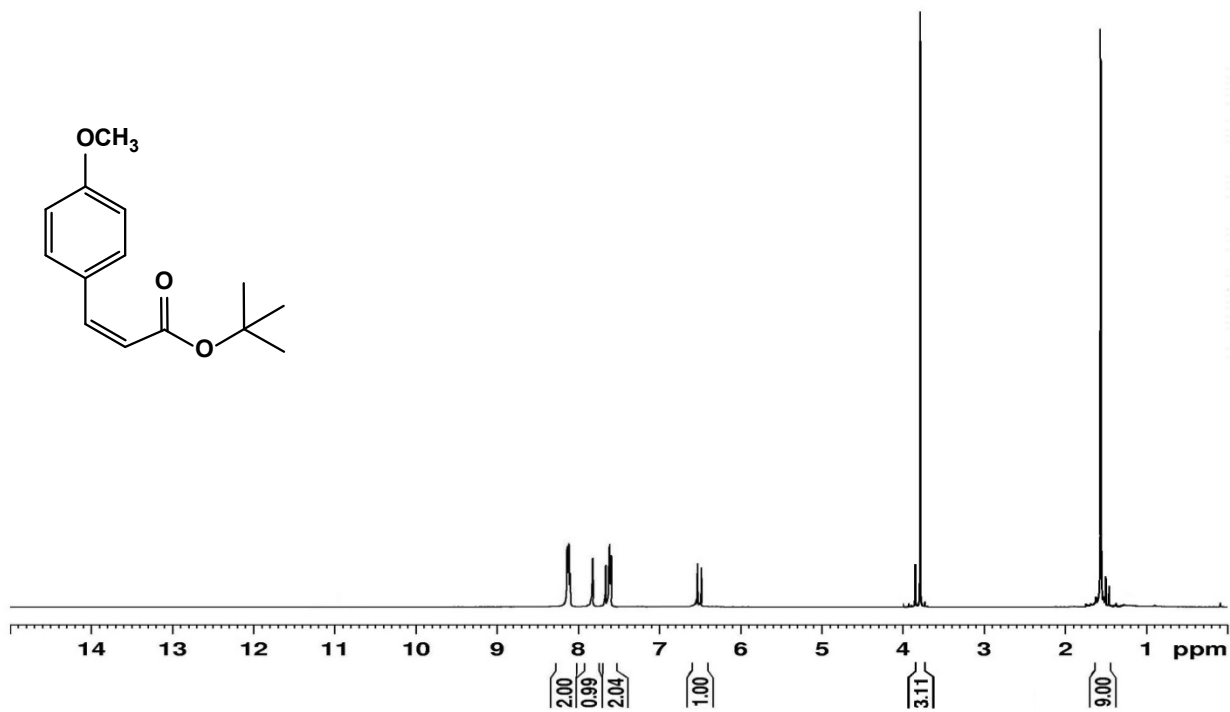


Figure S8 ^1H and ^{13}C NMR of Z-tert-butyl 3-(4-methoxyphenyl)acrylate

^1H NMR



^{13}C NMR

