Electronic Supplementary Material (ESI) for New Journal of Chemistry.

Supporting Information

Rhodium complex of bis(diphenylphosphinomethyl) dopamine-coated magnetic nanoparticles as efficient and reusable catalyst for hydroformylation of olefins

M. Nasiruzzaman Shaikh*[,a], M. Bououdina[b], Abiola Azeez Jimoh[a], Md. Abdul Aziz[a], Aasif Helal[a], Abbas Saeed Hakeem[a], Zain H. Yamani[a], Tae-Jeong Kim[c]

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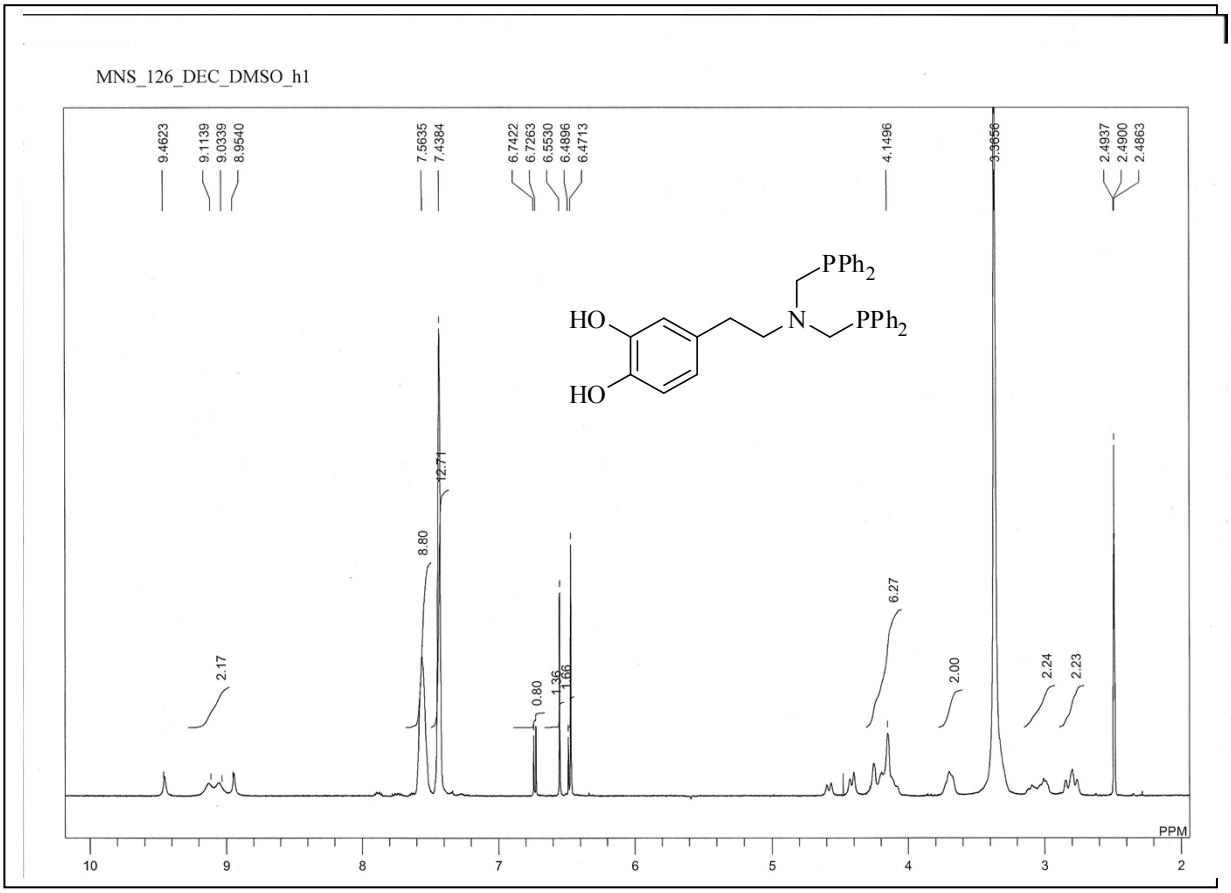
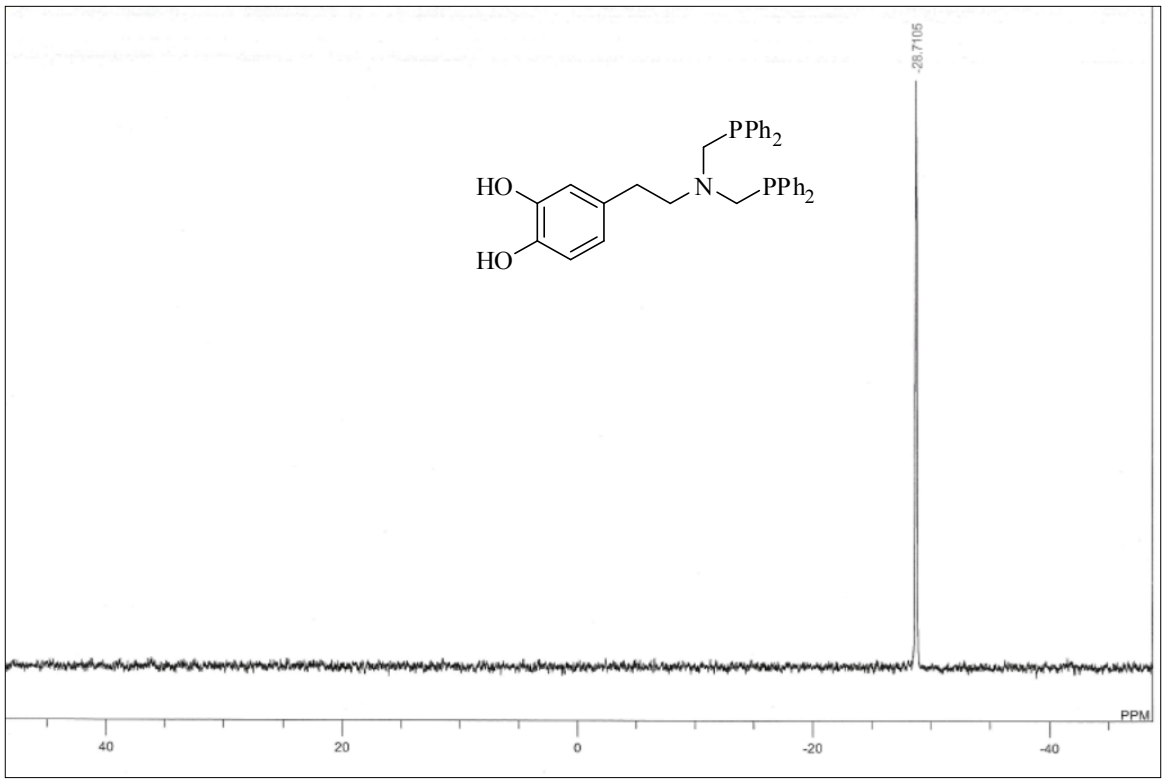
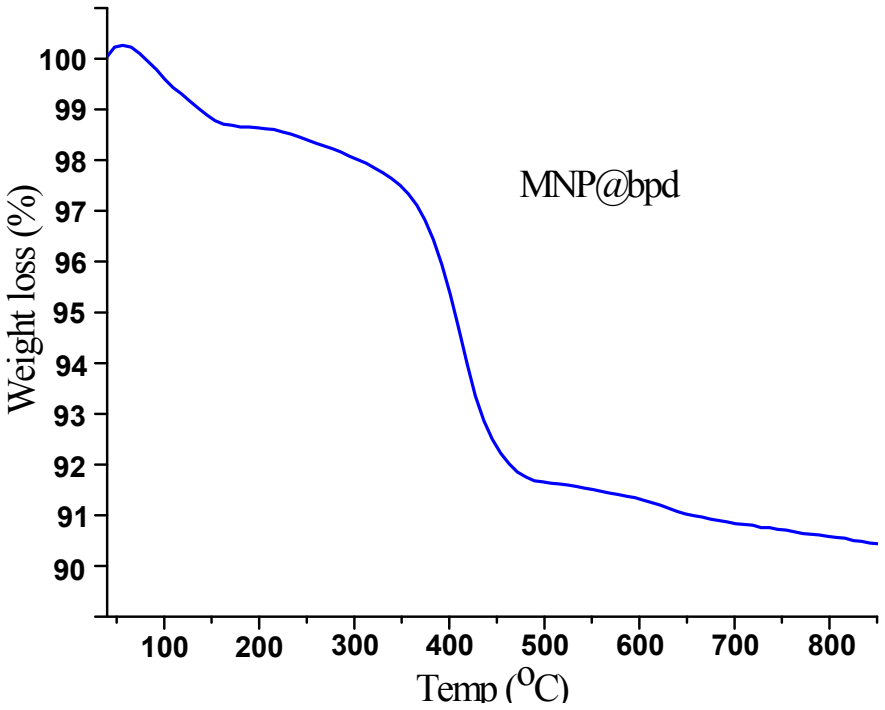


S1: ^{1}H NMR spectra of bis(diphenylphosphinomethyl) dopamine in DMSO-d_6 as solvent



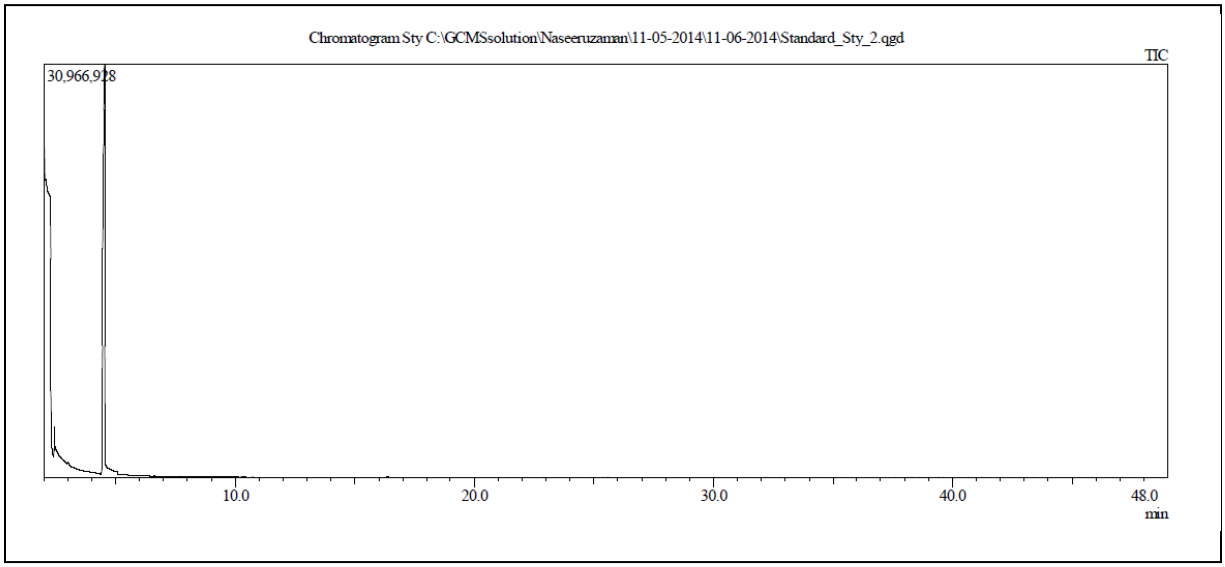
S2: ^{31P}NMR spectra of bis(diphenylphosphinomethyl) dopamine in DMSO-d_6 as solvent



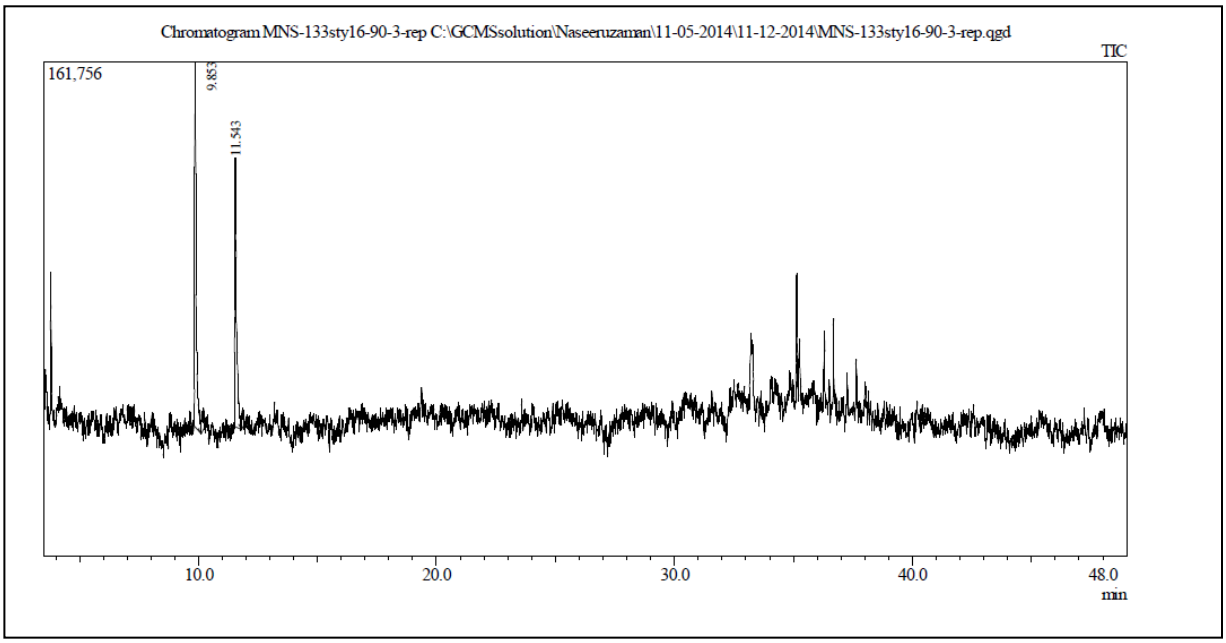
S3: TGA of the Fe_3O_4@bpd under argon atmosphere at 10°C/min heating rate

Table 1. Rietveld refinements results

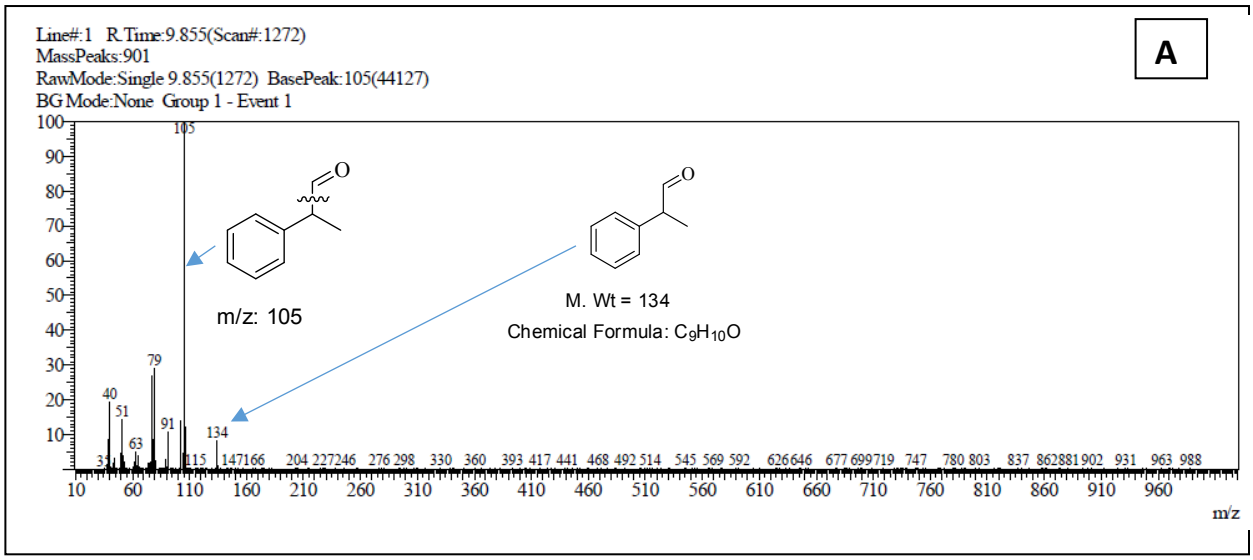
Composition	Crystallite size (nm)	Microstrain (%)	Lattice parameter (Å)	Goodness of Fit (GoF)
Fe_3O_4	7.0	0.160	a= 8.390 (7)	1.06
Fe_3O_4@bpd	7.2	0.421	a= 8.393 (8)	1.05

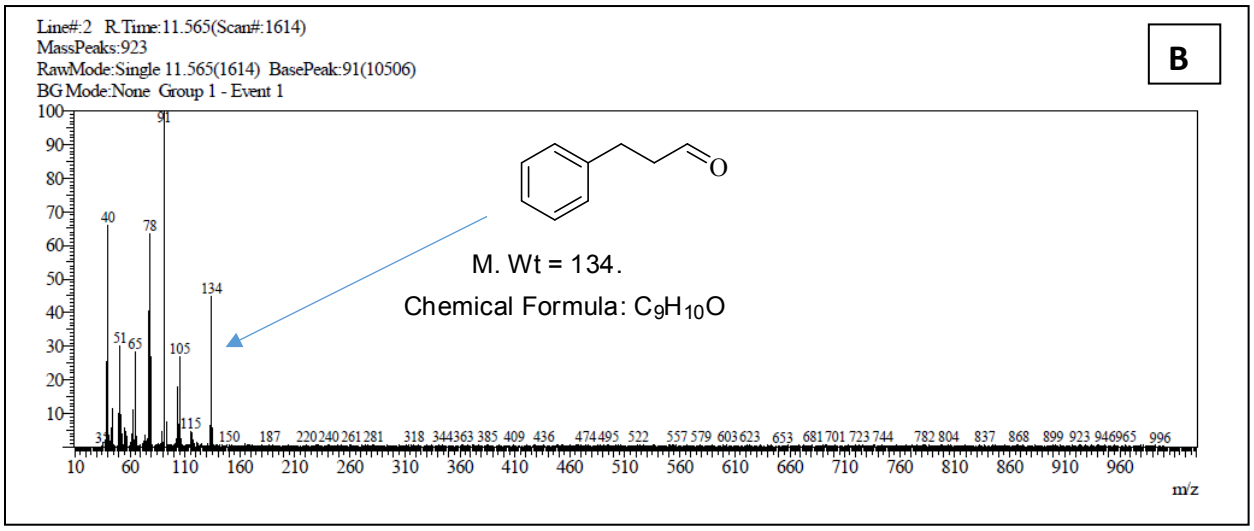


S4: GC spectrum of pure styrene in CH_2Cl_2

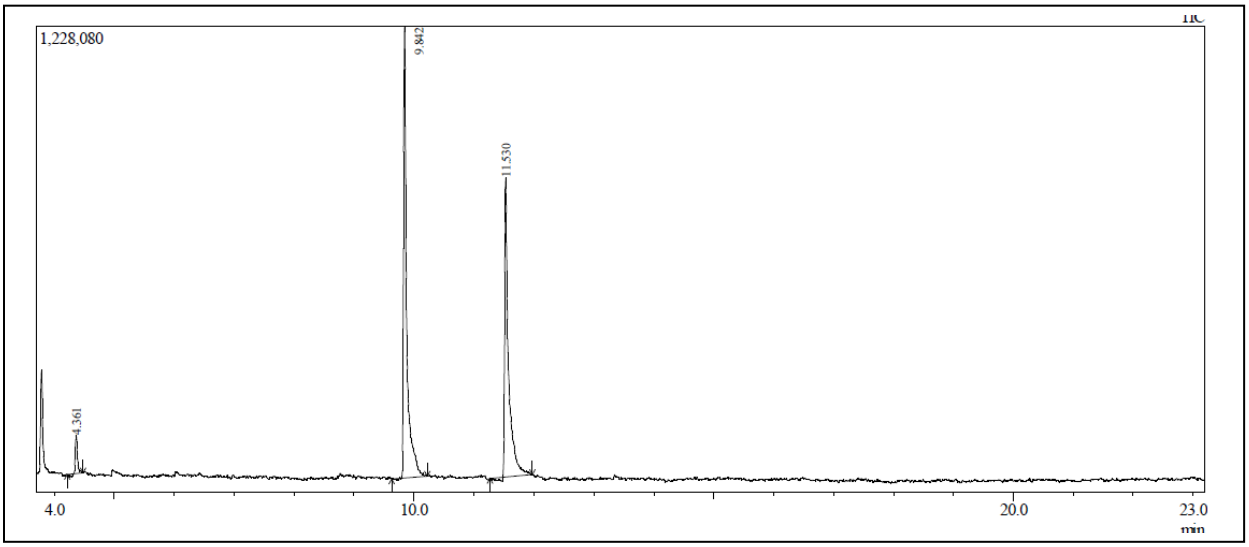


S5: GC spectrum of hydroformylated linear and branched product of styrene in CH_2Cl_2

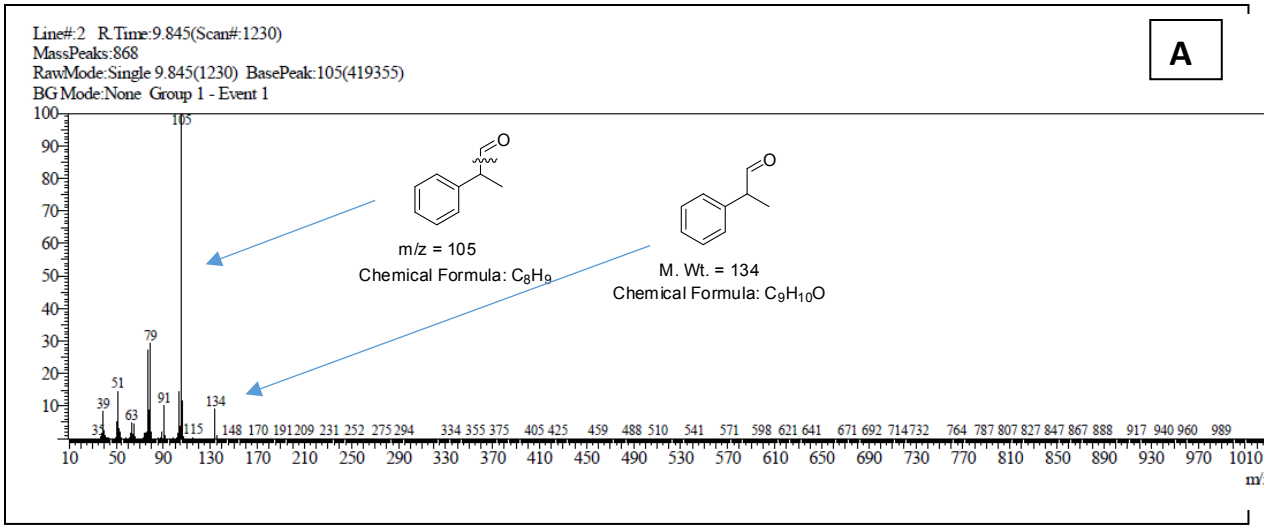


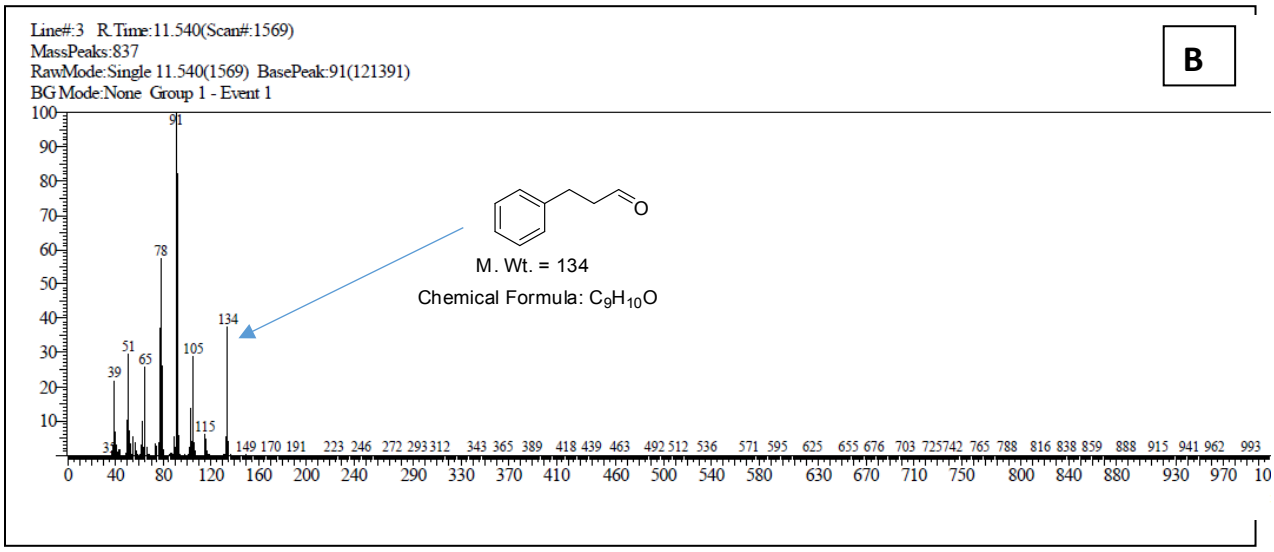


S6: Mass spectrum of hydroformylated A) branched and B) Linear product of styrene in CH_2Cl_2

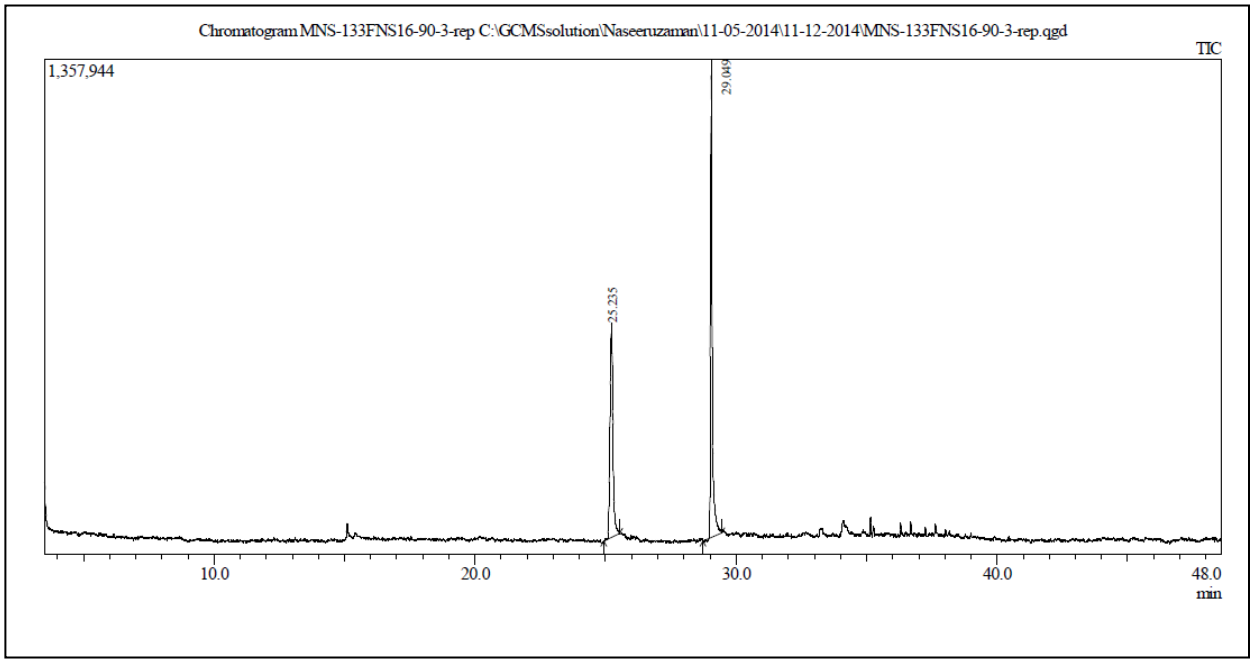


S7: GC spectrum of hydroformylated linear and branched product of styrene in CH_2Cl_2 after 2nd cycle of the reaction

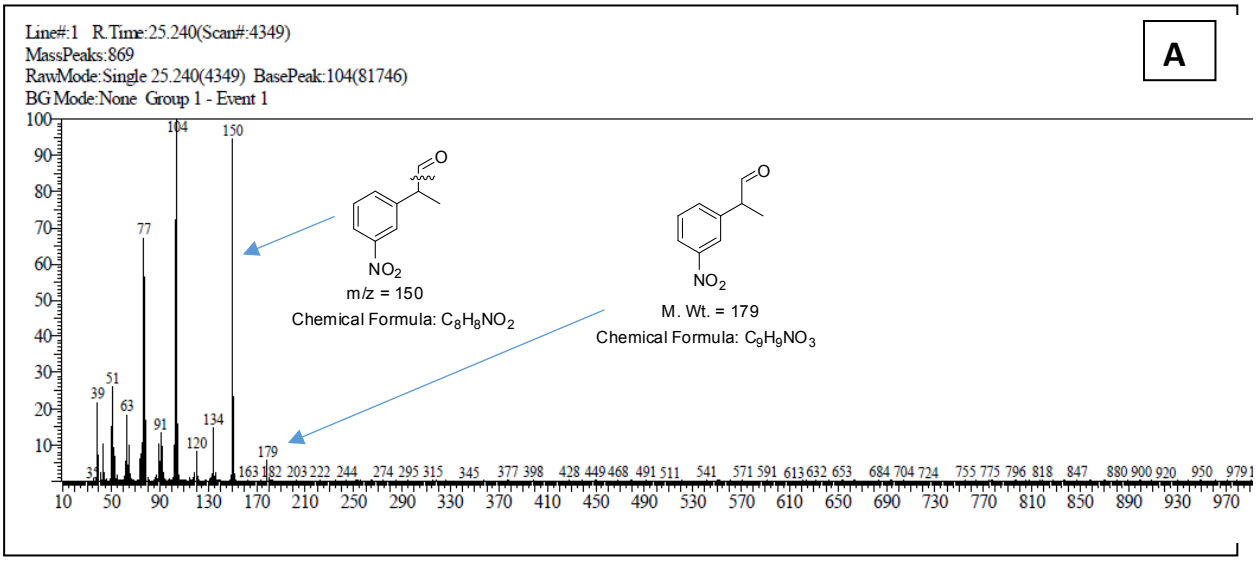


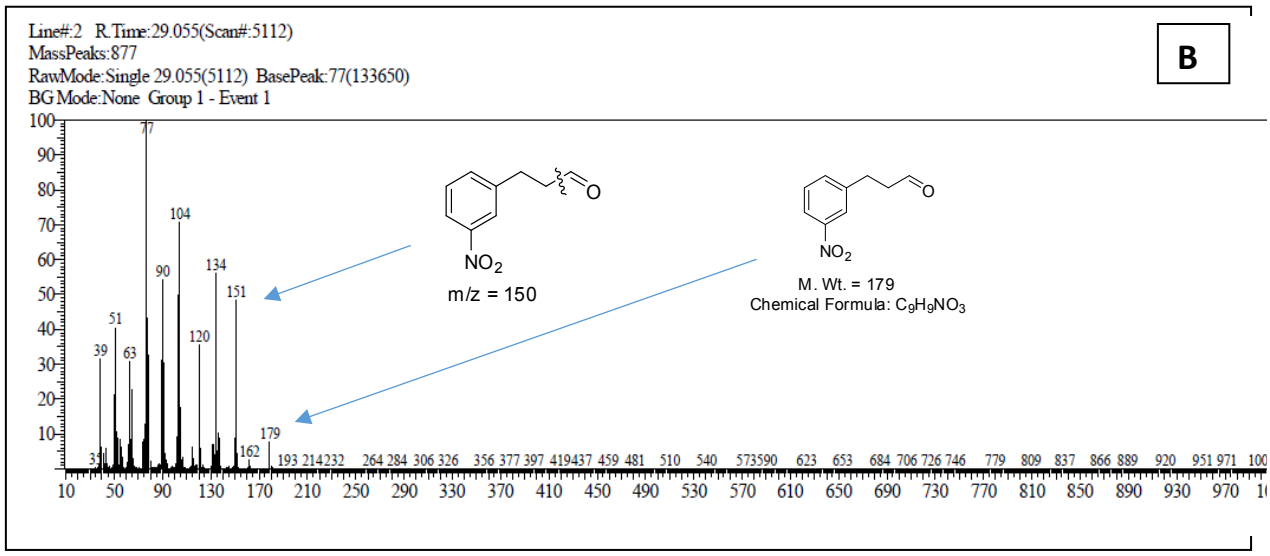


S8: Mass spectrum of hydroformylated A) Styrene (starting compound) B) branched and C) Linear product in CH_2Cl_2



S9: GC spectrum of hydroformylated linear and branched product of 3-nitro styrene in CH_2Cl_2





S10: Mass spectrum of hydroformylated A) branched and B) Linear product of 3-nitro styrene in CH_2Cl_2