

Electronic Supplementary Information

How neutral nitrogen-containing compounds are oxidized in oxidative-denitrogenation of liquid fuel with TiO_2 @carbon?

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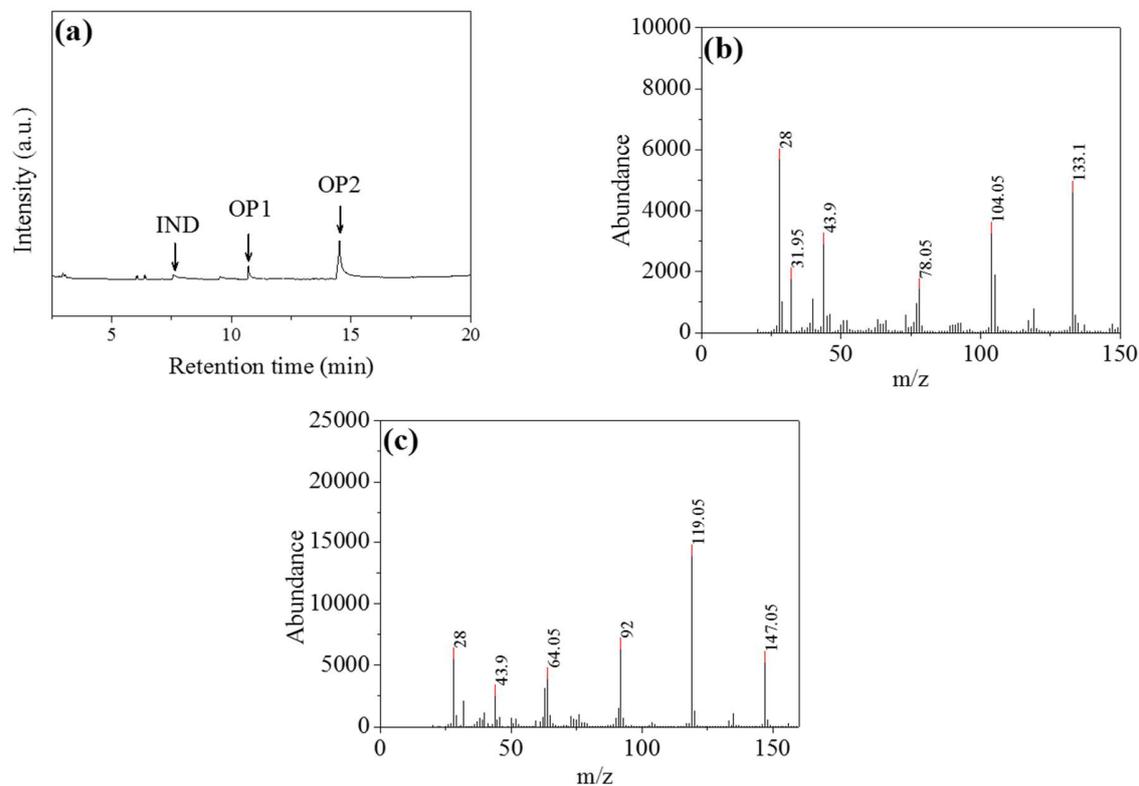


Fig S1 GC-MS spectra of polar phase collected after oxidation of IND under US treatment in the presence of $\text{TiO}_2@\text{C}$ catalyst and H_2O_2 (as oxidant) in CH_3COOH extractant. Figures (a) GC chromatogram, (b) and (c) MS fragmentation patterns of the peaks OP1 and OP2, respectively. The chemical structures, corresponding to the fragmentation patterns, are also shown on each figure.

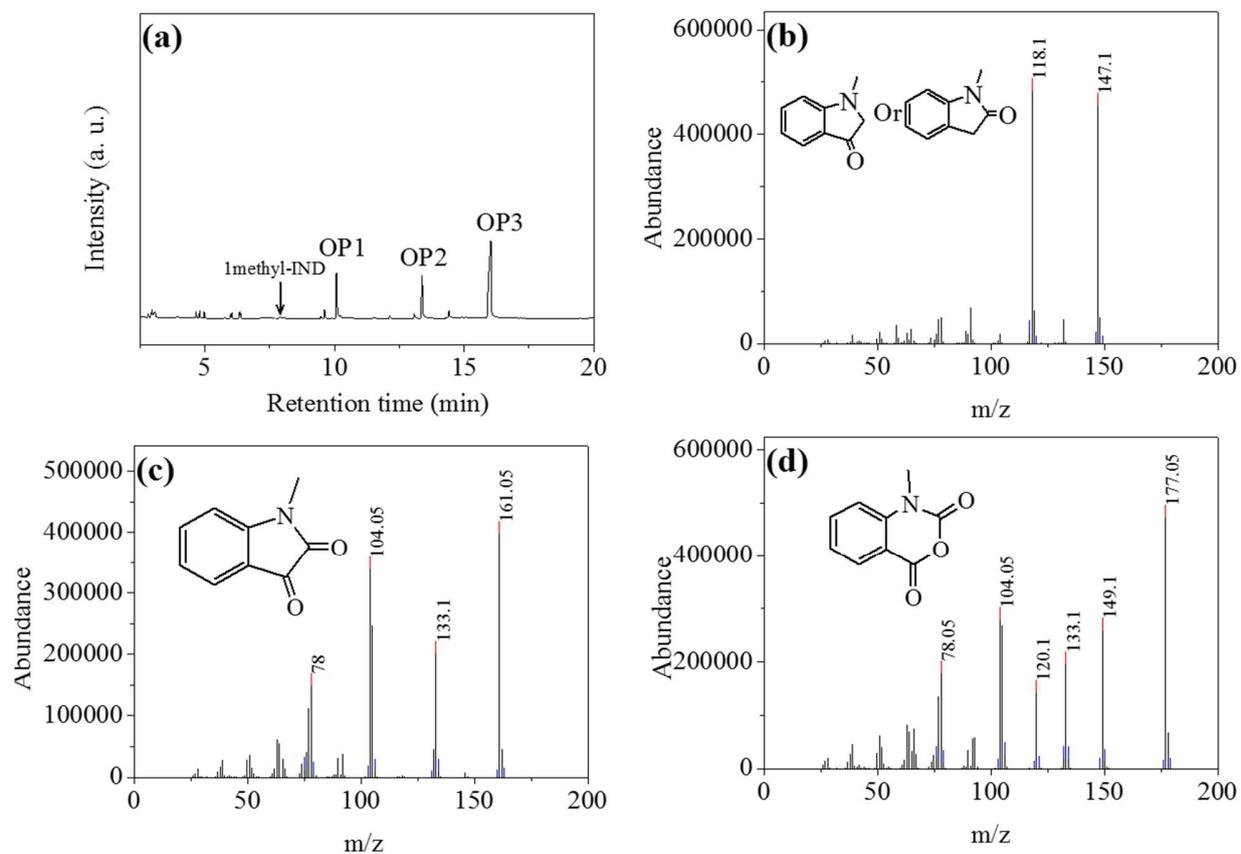


Fig S2 (a) GC spectrum of the product in the oxidation of 1-methyl-IND under US treatment in the presence of $\text{TiO}_2@\text{C}$ catalyst and H_2O_2 (as oxidant) in CH_3COOH extractant. Figures (b), (c) and (d) show the MS fragmentation patterns of peaks OP1, OP2 and OP3, respectively. The chemical structures, corresponding to the fragmentation patterns, are also shown on each figure.

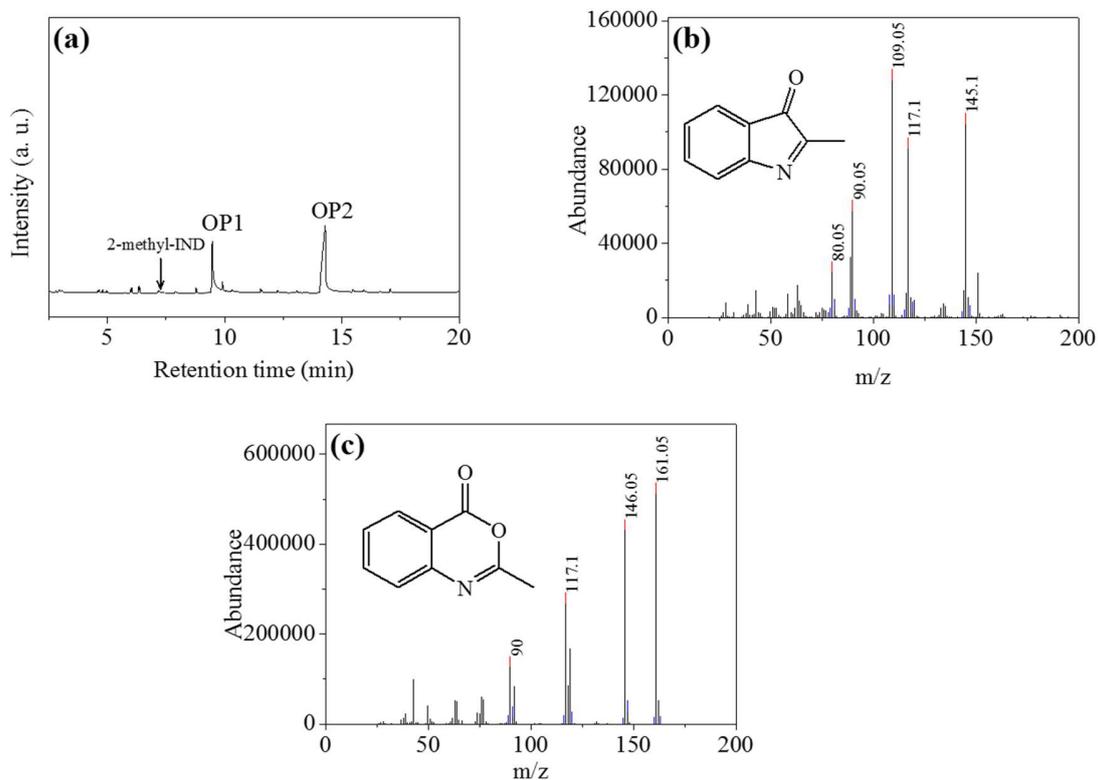


Fig S3 (a) GC spectrum of the product obtained in the oxidation of 2-methyl-IND under US treatment in the presence of $\text{TiO}_2@\text{C}$ catalyst and H_2O_2 (as oxidant) in CH_3COOH extractant. Figures (b) and (c) show the MS fragmentation patterns of peaks OP1 and OP2, respectively. The chemical structures, corresponding to the fragmentation patterns, are also shown on each figure.

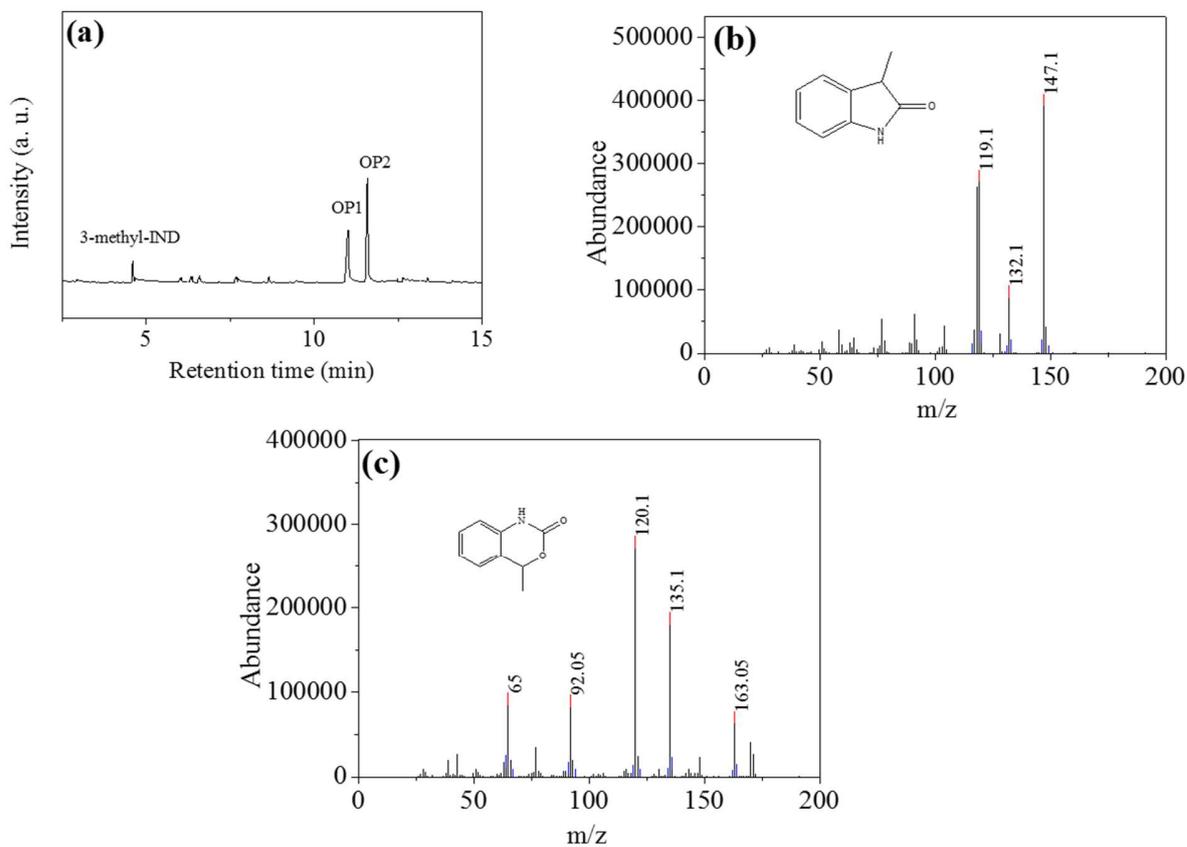


Fig S4 (a) GC spectrum of the product obtained in the oxidation of 3-methyl-IND under US treatment in the presence of $\text{TiO}_2@\text{C}$ catalyst and H_2O_2 (as oxidant) in CH_3COOH extractant. Figures (b) and (c) show the MS fragmentation patterns of peaks OP1 and OP2, respectively. The chemical structures, corresponding to the fragmentation patterns, are also shown on each figure.