

Supplementary information

Catalytic pyrolysis of LDPE and PP over zeolites in a stirred tank reactor

MD M. Hasan^{a,b}, Nuno Batalha^{a,c,d,}, Gabriel L. L. Fraga^a, Mohamed H. M. Ahmed^b, L.*

Pinard^c, Muxina Konarova^b, Bronwyn Laycock^a, Steven Pratt^a

^aSchool of Chemical Engineering, Faculty of Engineering, Architecture and Information Technology, University of Queensland, St Lucia, QLD 4072, Australia

^bAustralian Institute of Bioengineering and Nanotechnology (AIBN), University of Queensland, St Lucia, QLD 4072, Australia

^cInstitut de Chimie des Milieux et Matériaux de Poitiers (IC2MP), Université de Poitiers, CNRS, F-86073 Poitiers, France

^dUniversité de Lyon, Institut de Recherches sur la Catalyse et l'Environnement de Lyon (IRCELYON), UMR5256 CNRS-UCB Lyon 1, 2 Avenue Albert Einstein, 69626, Villeurbanne Cedex, France

* Corresponding Author: nuno.rocha-batalha@ircelyon.univ-lyon1.fr

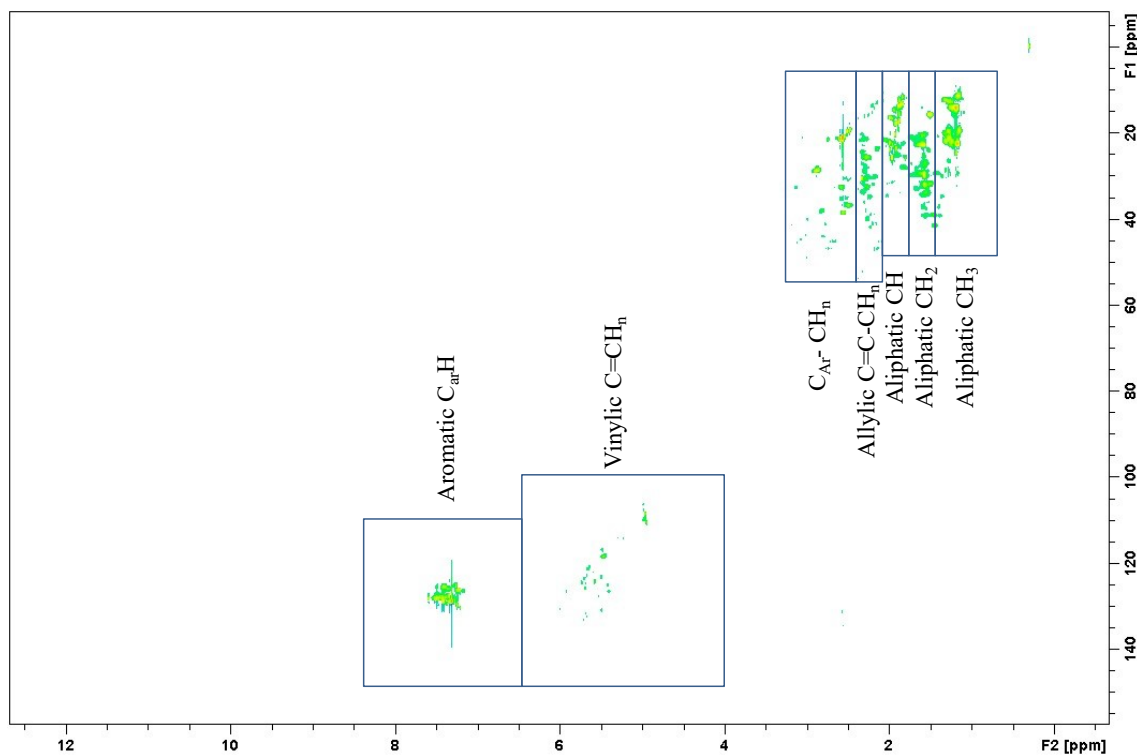


Figure S1. ^1H - ^{13}C HSQC NMR of liquid product obtained from the catalytic pyrolysis of PP over ZSM-5. Table S1 includes the integration area considered for each C-H bond type.

Table S1. CH bond allocation range in ^1H - ^{13}C HSQC NMR.

	^1H range (ppm)	^{13}C range (ppm)
Aliphatic CH_3	1.4 – 0.7	50 - 5
Aliphatic CH_2	1.8 – 1.4	50 - 5
Aliphatic CH	2.1 – 1.4	50 - 5
Allylic $\text{C}=\text{C}-\text{CH}_n$	2.4 – 2.1	55 - 5
$\text{C}_{\text{Ar}}-\text{CH}_n$	3.2 – 2.4	55 - 5
Vinyllic $\text{C}=\text{CH}_n$	6.5 -4.5	150 - 100
Aromatic $\text{C}_{\text{Ar}}\text{H}$	8.0 – 6.5	150 - 110