Studies on analysis and utilization of ash in Vietnamese coals

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Table 1. Chemical composition (wt%) in the ash of three coals

sample	Al_2O_3	BaO	CaO	Fe_2O_3	K_2O	MgO	MnO	Na_2O	P_2O_5
Quang Ninh	31.85	—	0.70	11.56	2.98	0.70	—	0.18	0.29
Thai Nguyen	2.67	—	72.16	6.44	0.04	0.20	0.35	—	0.43
Lang Son	24.70	—	1.98	25.82	3.54	1.12	—	0.55	0.31

[wt%]	SO_3	SiO_2	SrO	TiO_2	ZnO	MoO_3	As_2O_3	CuO	ZrO_2
	0.72	49.62	—	1.00	—	—	—	—	—
	14.74	2.54	0.03	0.28	0.02	0.01	0.01	0.01	0.01
	2.14	38.44	—	0.78	—	—	—	—	—

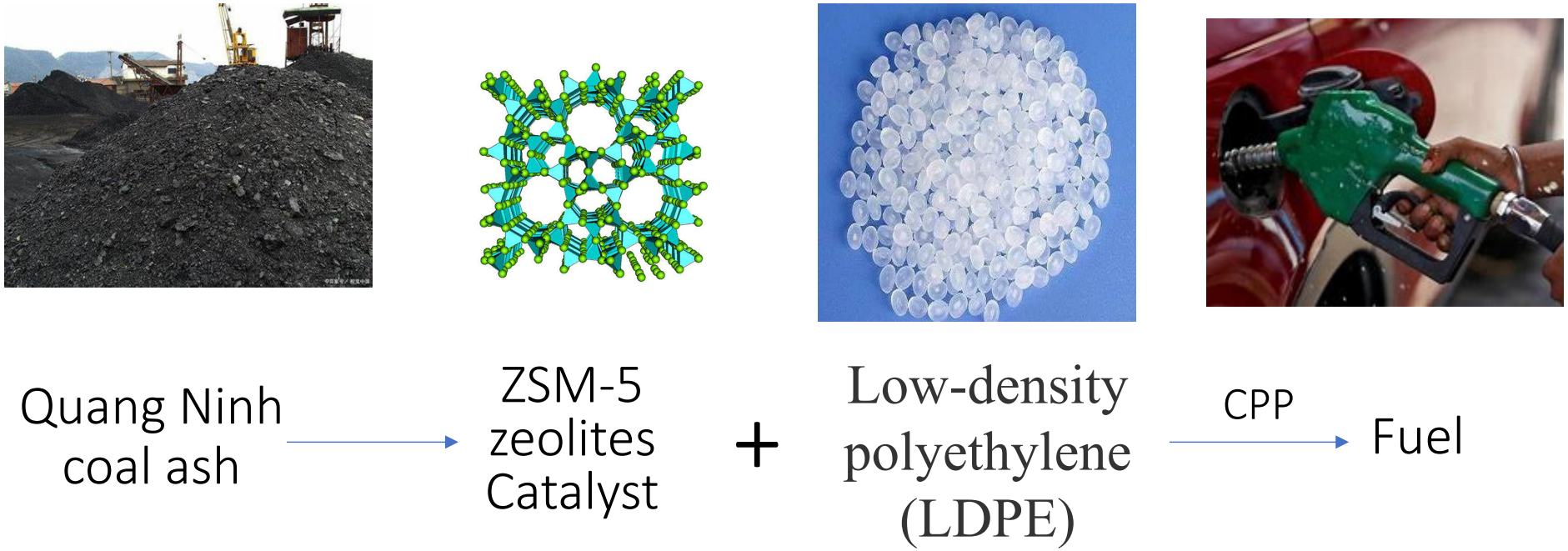

Fig. 1. Processing of my study: synthesized ZSM-5 zeolites, CPP it for obtaining fuel

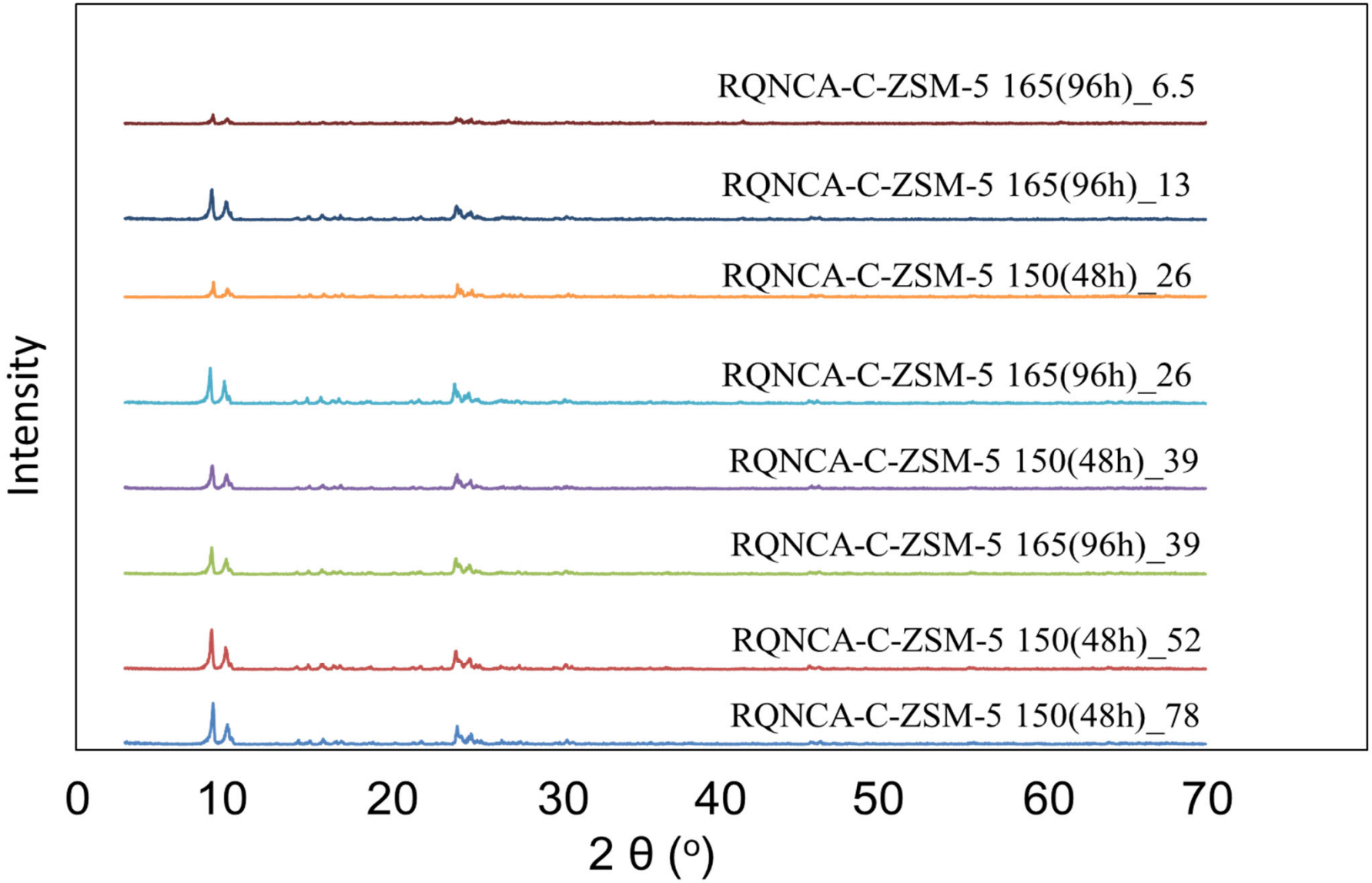

Fig. 2. XRD patterns of RQNCA-C-ZSM-5 _6.5, 13, 26, 39, 52 and 78 zeolites

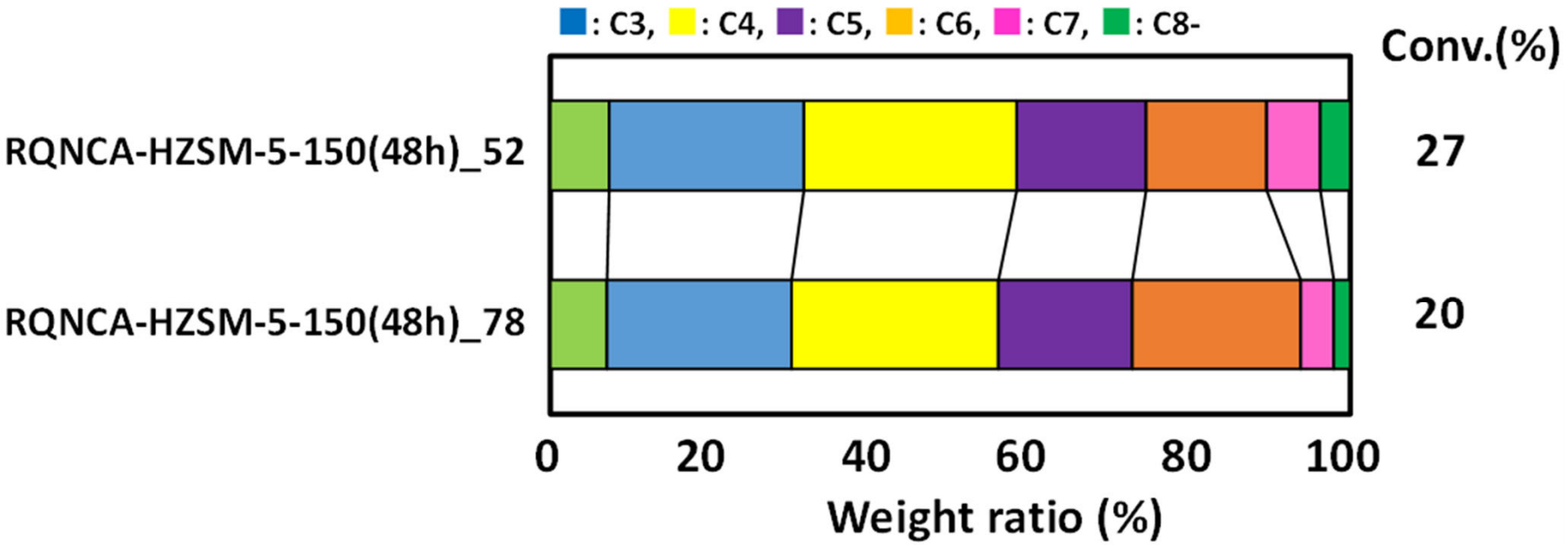

Fig. 3. Distribution of carbon numbers on catalytic cracking

Table 2. Product distribution and catalytic properties

Catalyst	Product distribution (wt.%)			Conv. (%)	Parameters in gasoline fraction			
	C1-C4	Gasoline (C5-C11)	C12-		O/P	iso- / n-	m/s	RON
RQNCA-H-ZSM-5 150(48h)_52	58	42	0	27	11	1.3	0.14	106
RQNCA-H-ZSM-5 150(48h)_78	55	45	0	20	20	0.8	0.16	106

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Thank you very much
for your attention!