

APPENDIX 5.3CONVERSION OF CUMENE AND o-XYLENE ON H-ZSM-5 [a-h] ZEOLITES WITH DIFFERENT DEGREES OF H⁺ EXCHANGEReaction conditions :

Amount of catalyst : 0.05g; Pulse size : 0.07 mmol.

Temperature : 673 K; N₂-flow rate : 780 cm³ min⁻¹

Pressure : 371 kPa

Zeolite	Fractional conversion [x]	
	Cumene	o-Xylene
H.Na-ZSM-5[a]	0.8265	0.1722
H.Na-ZSM-5[b]	0.7863	0.1583
H.Na-ZSM-5[c]	0.7415	0.1177
H.Na-ZSM-5[d]	0.5855	0.0902
H.Na-ZSM-5[e]	0.5392	0.0808
H.Na-ZSM-5[f]	0.2984	0.0406
H.Na-ZSM-5[g]	0.4861	0.0590
H.Na-ZSM-5[h]	0.7942	0.1562

APPENDIX 6.3PRODUCT DISTRIBUTION IN ISOMERIZATION OF m-XYLENE ON H-ZSM-5
OBTAINED BY THE DEAMMONIATION OF NH₄-ZSM-5 AT DIFFERENT
TEMPERATURES

Temperature [K]	673	773	873	1073	1223
Conversion of m-xylene [%]	59.57	58.83	54.83	23.37	3.86
<u>Hydrocarbons [wt%]</u>					
C ₂ -C ₄	0.80	0.66	0.22	0.00	0.00
Benzene	0.81	0.64	0.45	0.07	0.00
Toluene	16.07	14.26	13.06	3.86	0.37
p-Xylene	17.72	18.25	18.18	11.96	1.92
m-Xylene	40.43	41.17	45.17	76.63	96.14
o-Xylene	17.24	18.42	19.13	6.55	1.57
Trimethyl benzenes	6.93	6.60	3.71	0.91	0.00
<u>Total</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
p-/o-xylene	1.03	0.99	0.95	1.83	1.22
Selectivity for o- and p-xylenes	58.69	62.33	68.05	79.21	90.41
No. of strong acid sites per unit cell	2.1	2.0	1.4	0.2	0.0

APPENDIX 6.2

EXPERIMENTAL DATA ON IRREVERSIBLE ADSORPTION OF PYRIDINE ON
H-ZSM-5 [I - XIV] ZEOLITES OBTAINED AT DIFFERENT DEAMMONIA-
TION CONDITIONS

Zeolite	Amount of pyridine adsorbed irreversibly, q_1 [mmol.g ⁻¹]				
	Temperature of adsorption [K]				
	513	553	593	633	673
H-ZSM-5[I]	0.3911	0.3847	0.3770	0.3690	0.3597
H-ZSM-5[II]	0.3723	0.3585	0.3492	0.3420	0.3349
H-ZSM-5[III]	0.2799	0.2772	0.2540	0.2444	0.2357
H-ZSM-5[IV]	0.0691	0.0600	0.0495	0.0426	0.0372
H-ZSM-5[V]	0.0140	0.0111	0.0091	0.0074	0.0062
H-ZSM-5[VI]	0.4310	0.4206	0.4133	0.4048	0.3970
H-ZSM-5[VII]	0.3951	0.3848	0.3755	0.3643	0.3535
H-ZSM-5[VIII]	0.3257	0.3119	0.2987	0.2876	0.2791
H-ZSM-5[IX]	0.4160	0.4066	0.3970	0.3882	0.3784
H-ZSM-5[X]	0.3918	0.3822	0.3743	0.3664	0.3597
H-ZSM-5[XI]	0.4190	0.4099	0.4030	0.3941	0.3846
H-ZSM-5[XII]	0.3761	0.3628	0.3523	0.3435	0.3349
H-ZSM-5[XIII]	0.3753	0.3635	0.3519	0.3424	0.3349
H-ZSM-5[XIV]	0.3860	0.3745	0.3642	0.3563	0.3473

The founders say Dogecoin is not like Bitcoin, where people don't get involved for speculation, but to express feelings of sharing and concern. This also created that at the beginning of the dogecoin spread by people to share.

Technically, Dogecoin is actually a faction with Litecoin, which is based on the Scrypt algorithm and, like Litecoin, is easier to trade than Bitcoin, and they have more numbers, with Dogecoin digging up to 100 billion, compared with 21 million bitcoins.

The top 10 in 2014 were: Bitcoin, Ripple, Paycoin, Litecoin, Bitshares, MaidSafeCoin, Stellar, Dogecoin.

TikTok beat Elon Musk to become An Ambassador dogecoin.

Cryptoraing expects Dogecoin to cost \$0.003,520, which means a 38.42% increase

The Dogecoin creator posted a script on Twitter to block XRP fans.

Dogecoin is t

he second largest virtual currency in the world after Bitcoin.

At the time of writing, Dogecoin ranks 33rd in coinMarketCap ratings, with daily price increases of more than 4% Dogecoin Core 1.8 is currently available, the latest update to the Dogecoin protocol. This mandatory update includes some new features for the Dogecoin environment. The most controversial of these was the launch of the AuxPoW mining. This is called a combined mining - many shibe dog-burning people.

Dynamic . . . The Dogecoin creator posted a script on Twitter to block XRP fans.

Dogecoin (DOGE) / USDT long near \$0.0023 (ASO 14:00 BST) :D (DOGE)

Dogecoin jumps 26% on video prices posted by TikTok users

iOS version supports Cosmos (ATOM), Zcash (ZEC) and Dogecoin (DOGE)

After our careful examination and selection, we deci

ded to go online with Dogecoin trading and open the top-up in advance. Dogecoin Recharge will open at 19:00 on 17 April. Recharge has a rich prize waiting for you to come to get oh.

Blockcypher, for example, has become an Amazon Web service for blockchain technology.

They started cryptocurrencies such as Bitcoin, Litecoin and Dogecoin, because of this early versatility, it was easy to create their own full suite of tools for private blockchain solutions.

Jackson Palmer, founder of Dogecoin, is more opposed, arguing that the arrival of institutional investment will weaken the original spirit of centralization, anti-censorship, anti-regulation, etc. in cryptocurrencies and blockchain industries.

Like the Bitcoin QT client, the Dog Coin QT client was similarly renamed Dogecoin Core. This makes

it easy to separate the dog coin client from the dog coin network (both were previously known as Dogecoin dog coins)

Moon Litecoin / Moon Dash / Moon Dogecoin.

Related: Encryption: Twitter's "BTC Scams," Elon Musk and Dogecoin, Agency Wants BTC and ETH.

This morning (April 3), Elon Musk tweeted: "The value of Dogecoin may vary." Currently, Musk's Twitter identity is introduced as the former CEO of Dogecoin. In the past 20 hours, Musk has interacted frequently with Dogecoin

Dogecoin had a great weekend with the help of Elon Musk.

Dogecoin found support above \$0.0017 in this bearish market.

Robin Hood Cryptocurrencies Platform announces it will support Dogecoin (DOGE) on its free trading platform

The Dogecoin-Ethereum team recently announced an alpha version of Dogethereum, according to ETHNews.



APPENDIX 6.4

PRODUCT DISTRIBUTION IN ISOMERIZATION OF m-XYLENE ON H-ZSM-5
OBTAINED BY THE DEAMMONIATION OF NH₃-ZSM-5 FOR DIFFERENT PERIODS

<u>Period [hr]</u>	<u>1</u>	<u>4</u>	<u>12</u>	<u>48</u>
<u>Conversion of m-xylene [%]</u>	59.10	58.05	58.83	54.01
<u>Hydrocarbons [wt.%]</u>				
C ₂ - C ₄	0.11	0.50	0.66	0.16
Benzene	0.69	0.67	0.64	0.41
Toluene	16.05	16.07	14.26	11.32
p-Xylene	17.05	16.70	18.25	18.70
m-Xylene	40.90	41.95	41.17	45.99
o-Xylene	18.26	17.20	18.42	19.44
Trimethyl benzenes	6.94	6.91	6.60	3.98
<u>Total</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
p-/o-xylene	0.93	0.97	0.99	0.96
Selectivity for o-and p-xylenes	59.75	58.40	62.33	70.61
No. of strong acid sites per unit cell	2.3	2.1	2.0	1.6

APPENDIX 6.3CONVERSION OF CUMENE AND o-XYLENE ON H-ZSM-5 [I - XIV] ZEOLITES
OBTAINED AT DIFFERENT DEAMMONIATION CONDITIONSReaction conditions:

Amount of catalyst : 0.05g; Pulse size : 0.07 mmol.

Temperature : 673 K; N₂-flow rate: 780 cm³ min⁻¹

Pressure : 371 kPa

	Fractional conversion [x]	
	Cumene	o-Xylene
H-ZSM-5[I]	0.8481	0.1868
H-ZSM-5[II]	0.7863	0.1485
H-ZSM-5[III]	0.6543	0.0826
H-ZSM-5[IV]	0.0900	0.0134
H-ZSM-5[V]	0.0200	0.0048
H-ZSM-5 [VI]	0.8319	0.1706
H-ZSM-5[VII]	0.8185	0.1570
H-ZSM-5[VIII]	0.6660	0.0900
H-ZSM-5[IX]	0.8091	0.1502
H-ZSM-5[X]	0.7694	0.1469
H-ZSM-5[XI]	0.8127	0.1591
H-ZSM-5[XII]	0.7181	0.1355
H-ZSM-5[XIII]	0.7840	0.1540
H-ZSM-5[XIV]	0.7870	0.1440

APPENDIX 5.1

EXPERIMENTAL DATA ON STEPWISE THERMAL DESORPTION OF PYRIDINE
ON H-ZSM-5 [a-h] WITH DIFFERENT DEGREES OF H⁺ EXCHANGE

Zeolite	Amount of pyridine desorbed, q_d [mmol.g ⁻¹]					
	Temperature of desorption, T_d [K]					
	433 to 473	473 to 513	513 to 553	553 to 593	593 to 633	633 to 673
H.Na-ZSM-5[a]	0.048	0.023	0.010	0.008	0.007	0.005
H.Na-ZSM-5[b]	0.061	0.028	0.014	0.009	0.007	0.007
H.Na-ZSM-5[c]	0.070	0.037	0.023	0.027	0.018	0.009
H.Na-ZSM-5[d]	0.074	0.065	0.061	0.051	0.026	0.009
H.Na-ZSM-5[e]	0.072	0.077	0.066	0.066	0.043	0.014
H.Na-ZSM-5[f]	0.098	0.077	0.078	0.088	0.071	0.025
H.Na-ZSM-5[g]	0.116	0.101	0.086	0.077	0.069	0.026
H.Na-ZSM-5[h]	0.066	0.035	0.012	0.008	0.008	0.010