OFFRETITE METHOD 2, PROH

6.55Na_2O:1.91K_2O:1.0Al_2O_3:22.68SiO_2:252.37H_2O:0.92TMACl:22.68PrOH

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1 BATCH COMPOSITION CALCULATION

COMPOSITION MATRIX [C]

Compound	Na_2O	K_2O	Al_2O_3	SiO_2	H_2O	TMACl	PrOH
Mole ratio	6.550	1.910	1.000	22.680	252.370	0.920	22.680
Weight [g]	405.962	179.914	101.961	1362.712	4546.496	100.831	1362.968
Mol. wt. [g/mol]	61.979	94.196	101.961	60.084	18.015	109.599	60.096

BATCH MATRIX [B]

Compound	Na_2O	K_2O	Al_2O_3	SiO_2	H_2O	TMACl	PrOH
NaOH (98.0%)	0.7593	0.0000	0.0000	0.0000	0.2407	0.0000	0.0000
KOH (85.0%)	0.0000	0.7135	0.0000	0.0000	0.2865	0.0000	0.0000
$Na_2Al_2O_4$ (100.0%)	0.3781	0.0000	0.6219	0.0000	0.0000	0.0000	0.0000
SiO_2 (30.0%)	0.0000	0.0000	0.0000	0.3000	0.7000	0.0000	0.0000
H_2O (100.0%)	0.0000	0.0000	0.0000	0.0000	1.0000	0.0000	0.0000
TMACl (98.0%)	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000	0.0000
PrOH (100.0%)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000

RESULT MATRIX [X] = $[B]^{-1}\cdot[C]$ (SF=100.0000)

Substance	Mass [g]	Scaled Mass [g] (100.000)	Weighted mass [g]
NaOH (98.0%)	453.0280	4.5303	
KOH (85.0%)	252.1452	2.5215	
$Na_2Al_2O_4$ (100.0%)	163.9402	1.6394	
SiO_2 (30.0%)	4542.3731	45.4237	
H_2O (100.0%)	1185.5591	11.8556	
TMACl (98.0%)	102.8884	1.0289	
PrOH (100.0%)	1362.9682	13.6297	
Sum	8062.9022	80.6290	

RESULT MATRIX [X] = $[B]^{-1}\cdot[C]$ (SF=537.5268)

Substance	Mass [g]	Scaled Mass [g] (537.527)	Weighted mass [g]
NaOH (98.0%)	453.0280	0.8428	
KOH (85.0%)	252.1452	0.4691	
$Na_2Al_2O_4$ (100.0%)	163.9402	0.3050	
SiO_2 (30.0%)	4542.3731	8.4505	
H_2O (100.0%)	1185.5591	2.2056	
TMACl (98.0%)	102.8884	0.1914	
PrOH (100.0%)	1362.9682	2.5356	
Sum	8062.9022	15.0000	

2 Synthesis

Sample name	
Time	
Date	
Temperature	
Oven	
Liner	
Autoclave	
Drying	
Comment	

Calcination I

Date:

Mass [g]	Before calcination	After calcination
Weighing boat		
Weighing boat + sample		
Sample		

Ion exchange

Date:

Notes

Calcination II

Date:

Mass [g]	Before calcination	After calcination
Weighing boat		
Weighing boat + sample		
Sample		

3 Analysis

XRD

Date:

Sample name	Result	Comment

SEM

Date:

Sample name	Aspect ratio	Si/Al	Comment