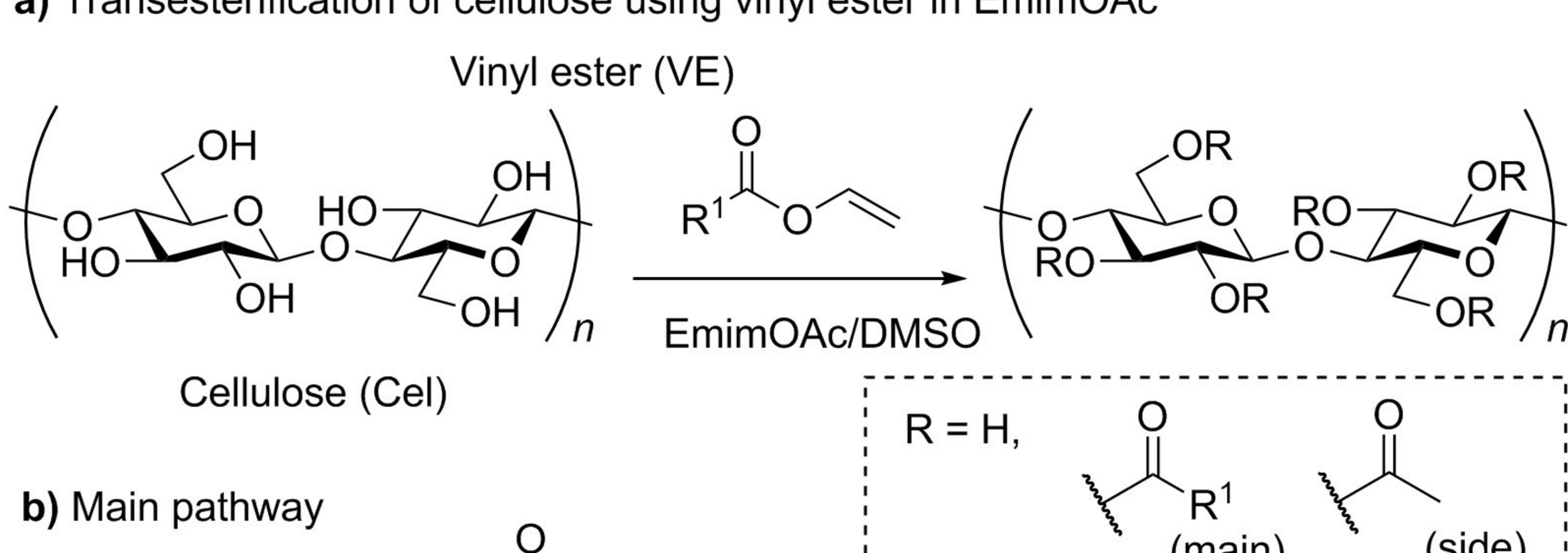
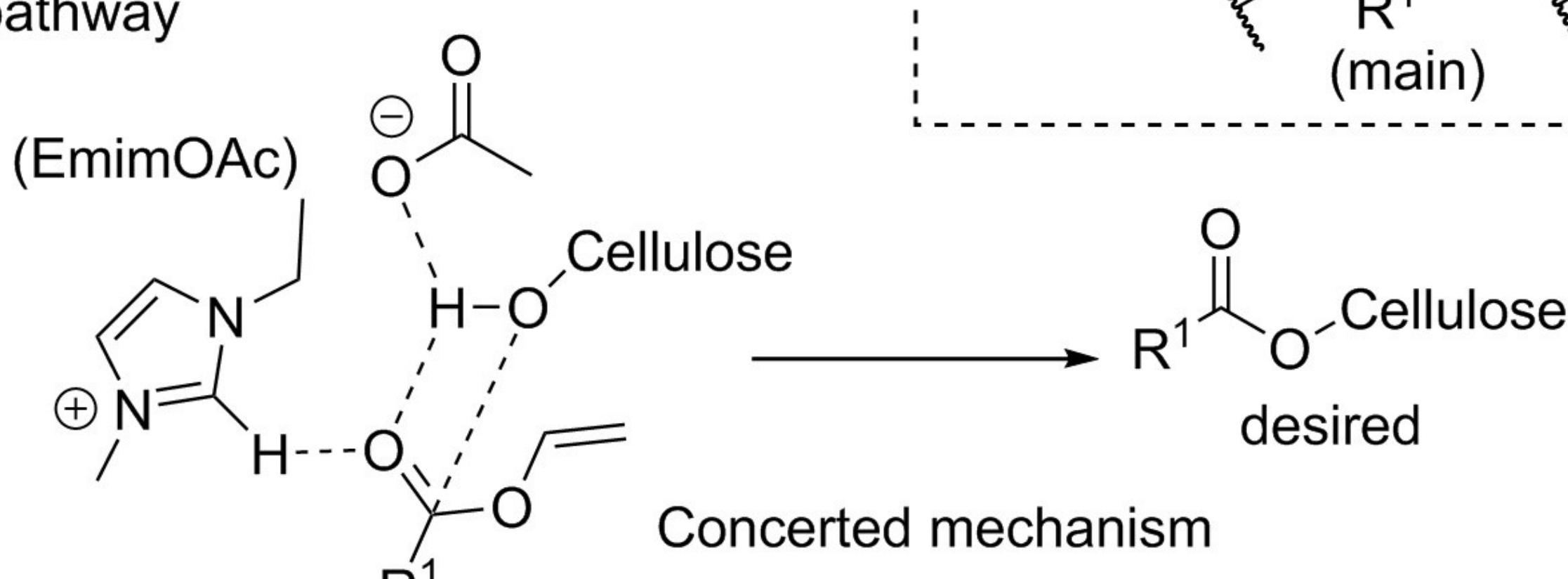


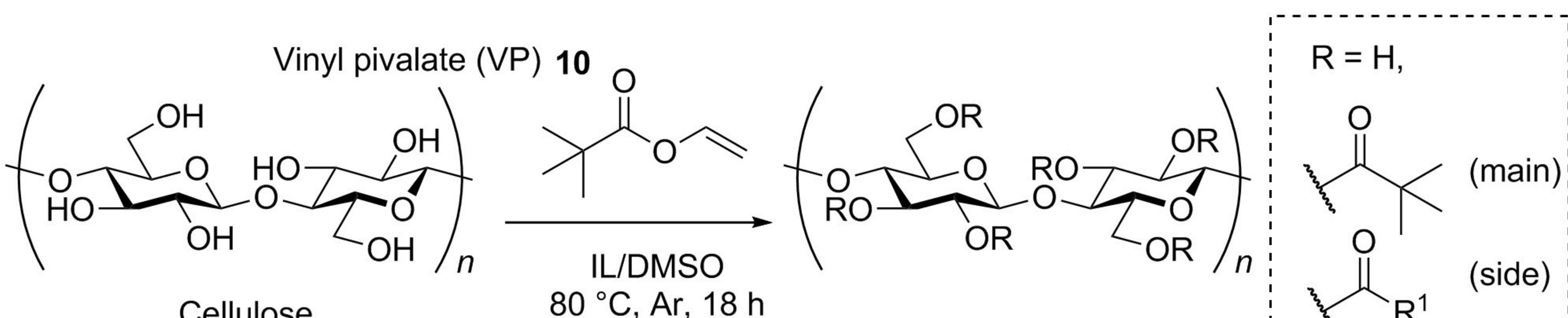
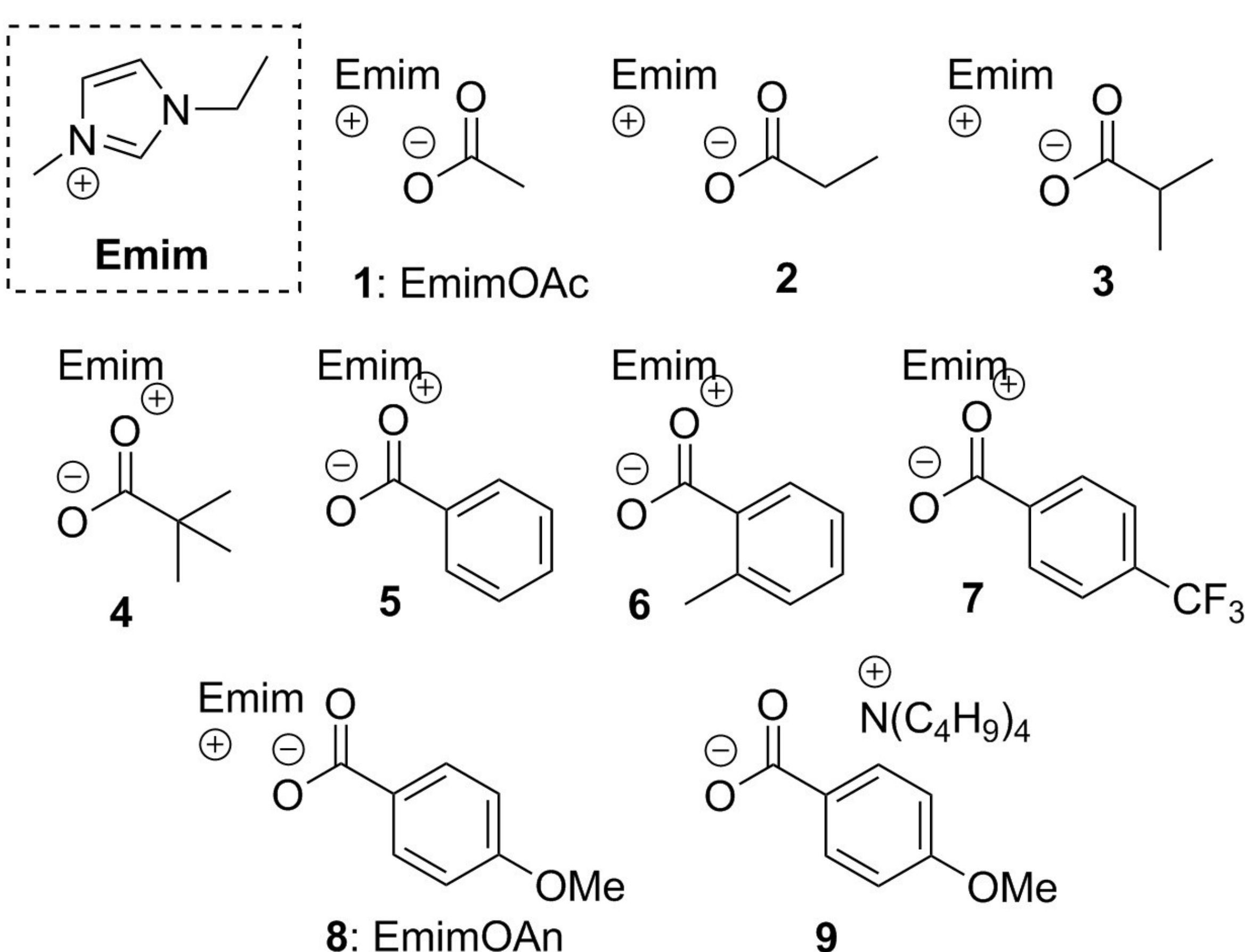
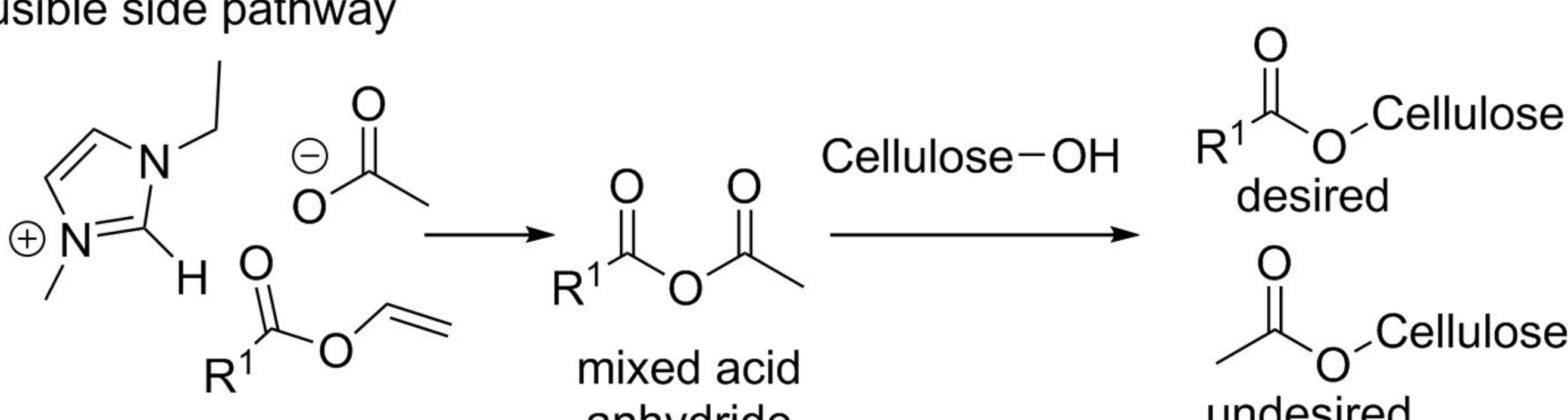
a) Transesterification of cellulose using vinyl ester in EmimOAc



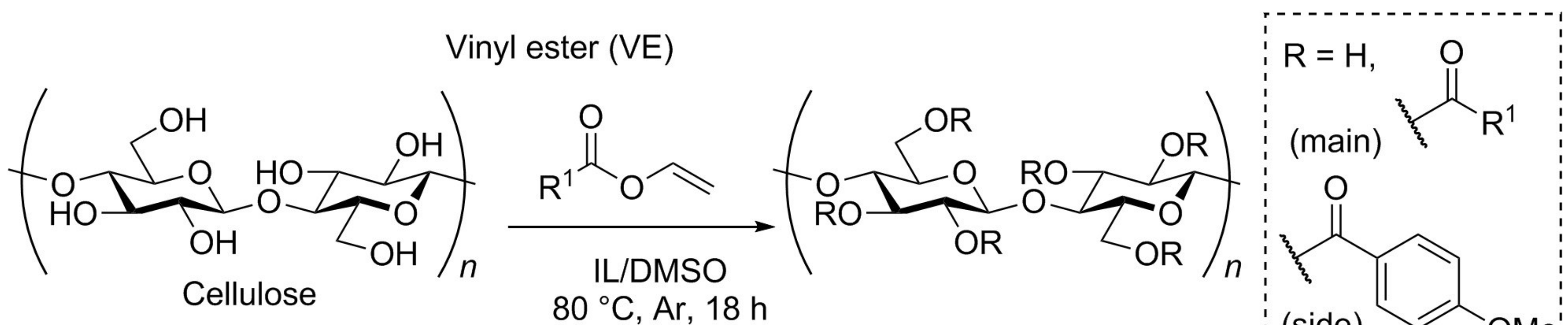
b) Main pathway



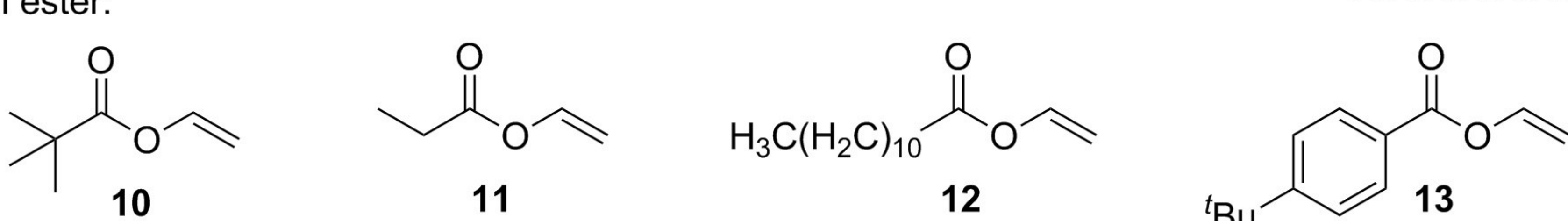
c) Plausible side pathway



Run	IL	pK _a ^b	Solubility ^c	DS _{main} ^d	DS _{side} ^d	DS _{total}	Selectivity (%)
1	1 (EmimOAc)	4.79	++++	2.43	0.54	2.97	82
2	2	4.79	+++	2.52	0.47	2.99	84
3	3	4.85	+++	2.55	0.11	2.66	96
4	4	4.94	++	- ^e	- ^e	2.58	- ^e
5	5	4.20	++	2.27	0.06	2.33	97
6	6	3.95		2.26	0.04	2.30	98
7	7	3.69		1.99	0.08	2.07	96
8	8 (EmimOAn)	4.47		2.78	0.03	2.81	99
9	9 (TBAOAn)	4.47		0.43	0.05	0.48	90



Vinyl ester:



Run	Vinyl ester	DS _{main} ^b	DS _{side} ^b	DS _{total}	Selectivity (%)
10	10	2.78 (2.43) ^c	0.03 (0.54) ^c	2.81 (2.97) ^c	99 (82) ^c
11	11	2.91	0.05	2.96	98
12	12	2.87	0.06	2.93	98
13	13	2.80	0.01	2.81	>99