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APPENDIX

Table 1 Effect of Mo content on the epoxidation of styrene using 0.1 g Mo-SBA-1 catalyst at 70°C for 3 h

Sample	% Mo loaded	Styrene conversion (%)	Selectivity (%)	
			Styrene oxide	Benzaldehyde
1	0	7.76±1.25	6.23±2.08	93.23±2.08
2	0.70	21.87±2.57	13.26±1.66	86.74±1.66
3	1.43	24.67±1.06	15.41±1.75	84.59±1.75
4	3.50	30.90±2.44	16.85±2.44	83.15±2.44
5	5.00	44.63±2.11	18.07±1.52	81.93±1.52
6	7.20	60.26±2.72	36.90±2.47	63.10±2.47
7	10.00	63.32±3.07	14.49±3.34	85.51±3.34
8 (Impregnation)	7.00	14.74±1.54	9.26±2.87	90.74±2.87

Table 2 Effect of the reaction temperature on the epoxidation of styrene using 0.1 g catalyst for 3 h with 7.20% Mo content

Reaction temperature (°C)	Styrene conversion (%)	Selectivity (%)	
		Styrene oxide	Benzaldehyde
60	42.11±2.56	17.84±3.26	82.16±3.26
70	60.26±2.72	36.90±2.47	63.10±2.47
80	46.04±3.12	20.08±2.07	79.92±2.07

Table 3 Effect of the reaction time on the epoxidation of styrene using 0.1 g catalyst at 70 °C with 7.20% Mo content

Reaction time (h)	Styrene conversion (%)	Selectivity (%)	
		Styrene oxide	Benzaldehyde
0.5	18.25±1.45	6.23±2.90	93.77±2.90
1	58.90±2.06	19.49±3.08	80.51±3.08
2	60.42±2.40	18.68±2.75	81.32±2.75
3	60.26±2.72	36.90±2.47	63.10±2.47
4	66.15±1.98	21.72±2.73	78.28±2.73
5	67.58±3.44	21.46±1.58	78.54±1.58
6	74.97±2.67	19.83±2.04	80.17±2.04
7	84.58±4.03	18.39±3.08	81.61±3.08

Table 4 Effect of the amount of catalyst used at 70 °C for 3 h with 7.20% Mo content

Catalyst used (g)	Styrene conversion (%)	Selectivity (%)	
		Styrene oxide	Benzaldehyde
0.10	60.26±2.72	36.90±2.47	63.10±2.47
0.20	63.29±1.47	19.85±2.86	80.15±2.86
0.30	66.76±3.69	15.95±1.98	84.05±1.98

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