Supporting Information

Mesoporous poly-melamine-formaldehyde (mPMF) – a highly efficient catalyst for chemoselective acetalization of aldehydes

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	° °	10 mol% catalyst MeOH 60°C, 24 h	OMe OMe	
Entry	Catalyst		pK _a of Catalyst	Yield ^[b] [%]
1	Melamine		5.3	31
2	2-Aminopyridine	H_2N N NH_2	6.9	[c]
3	3-Aminopyridine	N NHa	6.0	53
4	4-Aminopyridine	N N NH ₂	9.2	2
5	2-Aminopyrimidine		3.5	47
6	2-Pyridinol	OH OH	11.7	52

Table S1 Acetalization of *trans*-cinnamaldehyde over various amine catalysts.^[a]

[a] General reaction conditions: 1 mmol of trans-cinnamaldehyde in 1 ml of anhydrous methanol, 10 mol% of amine catalyst, 60°C, 24 h. [b] GC yield. [c] Decomposition of reaction.



Figure S1 N₂ adsorption-desorption isotherms of mPMF.



Figure S2 PA-FTIR spectrum of mPMF showing peaks associated with NH₂ or NH stretching at 3400 cm⁻¹, CH₂ stretching at 2950 cm⁻¹, imine stretching at 1600 cm⁻¹, and triazine stretching at 1550 cm⁻¹ and 1480 cm⁻¹.



Figure S3 ¹³C NMR spectrum of mPMF showing peaks associated with triazine carbon at 166 ppm, and bridging CH_2 groups at 48–54 ppm. The signal at 29.46 was from DMSO.



Figure S4 TGA profile of mPMF. The weight loss below $\sim 150^{\circ}$ C was due to solvent evaporation.



Figure S5 Hydrogen bonding models of *trans*-cinnamaldehyde and methanol with (a) melamine, (b) 2-pyridinol, and (c) 4-aminopyridine.



Figure S6 ¹H NMR spectrum of a mixture of *trans*-cinnamaldehyde and melamine in CDCl₃. Insert: ¹H NMR spectrum of (a) aldehyde proton of *trans*-cinnamaldehyde at 9.630–9.655 ppm, and (b) amine protons of melamine at 1.566 ppm in CDCl₃. Conditions for NMR collection: DS, 2; SWH, 8223.685 Hz; FIDRES, 0.125483 Hz; AQ, 3.98 sec; RG, 203; DW, 60.8 μ sec; DE, 6 μ sec; D1, 1 sec; TE, 297 K.