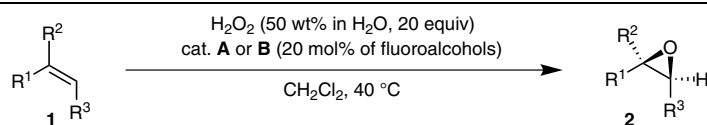
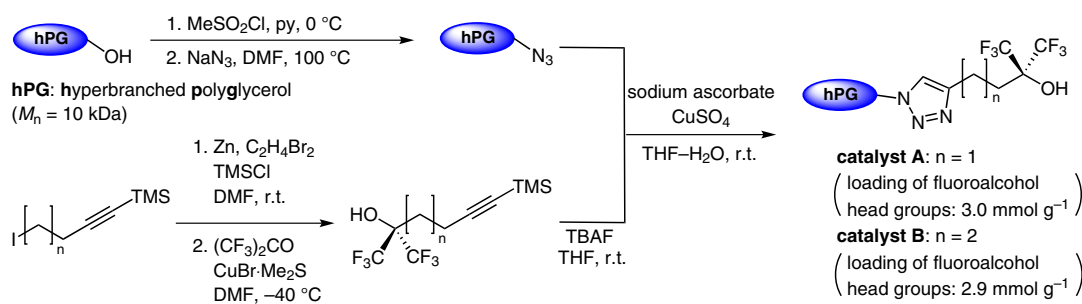


Dendritic Fluoroalcohols Catalyzed Alkene Epoxidation with H₂O₂



Results:

substrate	product	catalyst	time (h)	GC conv. (%)	GC yield (%)
		A	15	98	95
		B	16	97	93
		A	15	98	10-26
		A	19	97	94
		B	19	95	90
		A	24	quant.	quant.
		B	23	quant.	quant.
		A	72	48	35
		B	72	98	28
		A	72	37	28
		B	70	42	32

Significance: Hyperbranched polyglycerol immobilized fluoroalcohols (catalyst **A** and **B**) were prepared and applied to the epoxidation of alkenes. Thus, the reaction of alkenes **1** and aqueous hydrogen peroxide with 20 mol% of the fluoroalcohol unit of the catalyst gave the corresponding epoxides **2** in up to quantitative yield.

Comment: Catalysts **A** and **B** were recovered by ultrafiltration (molecular-weight cut-off of the membrane: 5 kDa) and reused twice for the epoxidation of cyclooctene without significant loss of catalytic activity. Hexafluoro-2-propanol showed lower catalytic activity for the epoxidation of **1d** under similar conditions (24 h, **2d**: 14% yield).

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