

## Supplementary Material:

# New methods to study the behavior of molecularly imprinted polymers in aprotic solvents

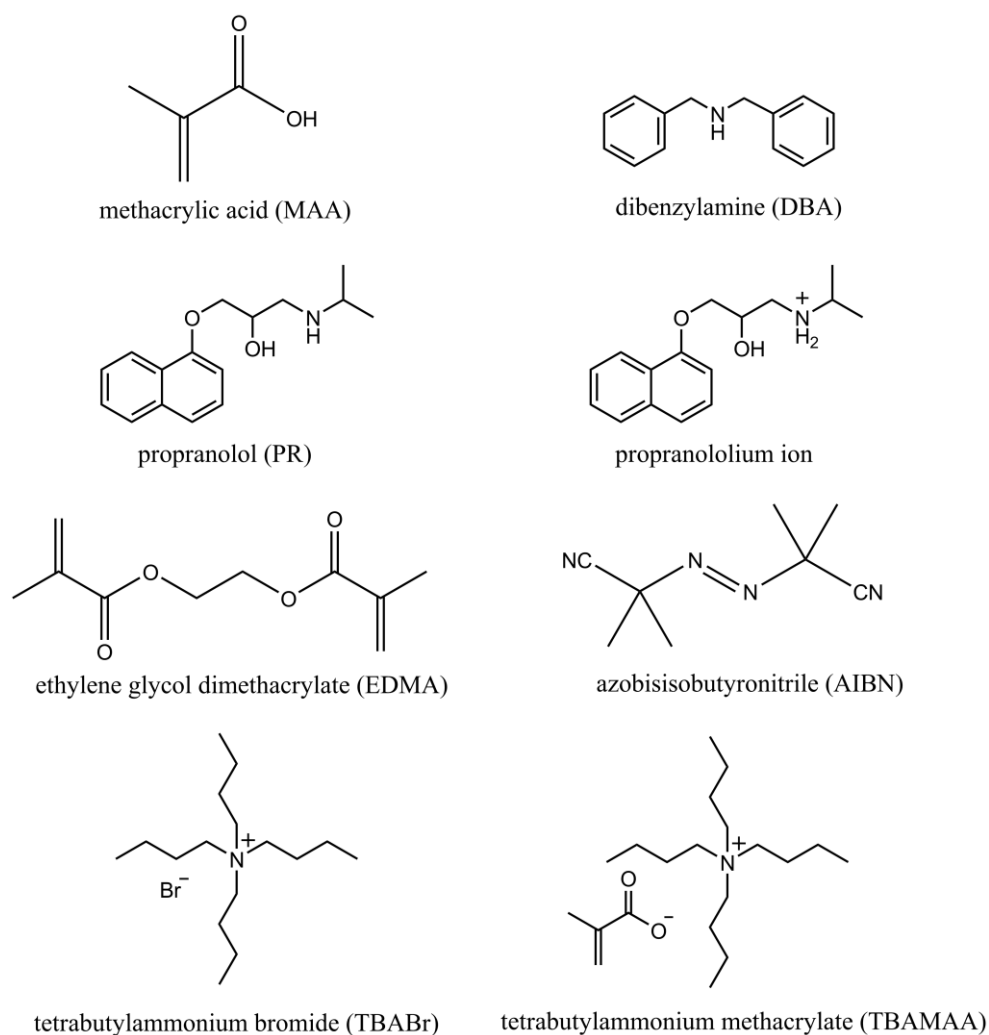
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### 1. Structure of compounds



**Figure S1.** Structures of compounds.

## 2. Polymer preparation

**Table S1.** The composition of the PR MIP.

Compound	Added amount	
PR	55.0 mg	0.212 mmol
MAA	0.143 mL	1.69 mmol
EDMA	1.591 mL	8.43 mmol
ACN	2.310 mL	-
AIBN	21.3 mg	0.130 mmol

## 3. Equilibrium binding measurements

**Table S2.** Initial concentrations and phase ratios,  $F$ , used in adsorption experiments.

Polymer	$F$	medium	initial concentration of PR (M)
PR MIP	100	ACN	$5 \cdot 10^{-4} - 5 \cdot 10^{-3}$
Phenomenex Strata-X-CW	100	ACN	$2 \cdot 10^{-3} - 5 \cdot 10^{-3}$
Phenomenex Strata-X-CW:NIP, 1:4.4	100	ACN	$5 \cdot 10^{-4} - 2.5 \cdot 10^{-3}$
NIP	100	ACN	$1.5 \cdot 10^{-4} - 2.5 \cdot 10^{-3}$
PR MIP (competition measurement)	200	toluene	$10^{-4} - 10^{-3}$

#### 4. Compositions used in the conductometric measurements

**Table S3.** Composition of the systems used in the conductometric measurements.

System	Amine: MAA molar ratio	amount of			
		amine or salt <i>mmol</i>	MAA <i>mmol</i>	EDMA <i>mmol</i>	ACN <i>mL</i>
propranolol prepolymerization mixtures	1:0	1.10	-	43.85	12.0
	1:1	1.10	1.10	43.85	12.0
	1:4	1.10	4.40	43.85	12.0
	1:8	1.10	8.81	43.85	12.0
DBA prepolymerization mixtures	1:0	1.10	-	43.85	12.0
	1:1	1.10	1.10	43.85	12.0
	1:4	1.10	4.40	43.85	12.0
	1:8	1.10	8.80	43.85	12.0
MAA in prepolymerization medium	-	-	8.81	43.85	12.0
TBABr in prepolymerization medium	-	0.201	-	43.85	12.0
TBAMAA in prepolymerization medium	-	0.201	-	43.85	12.0

#### 5. Estimation of the degree of dissociation in the prepolymerization mixture of the propranolol MIP

In the main part of the paper, it has been deduced from the conductivity of the prepolymerization mixture of the propranolol MIP that the prepolymerization complexes dissociate ionically. The degree of dissociation cannot be determined with certainty without further investigations into the composition and distribution of complexes being present. A rough estimate may be obtained, however, by comparing the measured specific conductivities of the prepolymerization mixtures with those of salts which are likely to ionize at a high extent in the prepolymerization medium. Table 1 in the paper shows that two such salts, tetrabutylammonium methacrylate and tetrabutylammonium bromide, both at 0.01 M concentration, have much higher conductivity than the prepolymerization mixtures have in the same medium. Thus one can estimate, that the ion concentrations in the prepolymerization mixtures are much lower than 0.01 M, and therefore the degree of dissociation of the prepolymerization complexes, the concentration of which is limited by the template concentration of 0.053 M, is likely to be below ten percent.