

Supporting Information

How Ionic Liquid Gels Work on the Removal of Bisphenol A from Wastewater

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Table of contents

Figure S1. Strain and Frequency sweeps of 3 wt% DBS-based ionogels.	S3
Figure S2. Pictures of the cut halves of gels of DBS (3 wt%) taken after 5 h and 24 h.	S4
Table S1. Removal efficiency as a function of time, for 3 wt% gels of DBS in aliphatic ionic liquids.	S5
Table S2. Removal efficiency as a function of time, for 3 wt% gels of DBS in aromatic ionic liquids.	S6
Table S3. Removal efficiency in the recycle of 3 wt% gels of DBS in [bmpyrr][NTf ₂] and [bmim][PF ₆].	S7
Table S4. Removal efficiency in the recycle of 3 wt% gel of DBS in [bmim][NTf ₂].	S8
Table S5. Removal efficiency in the recycle of 3 wt% gel of DBS in [bmipip][NTf ₂].	S9
Table S6. Adsorption capacities and equilibrium concentrations for 3wt% gels of DBS in aromatic ILs.	S10
Table S7. Adsorption capacities and equilibrium concentrations for 3wt% gels of DBS in aliphatic ILs.	S11

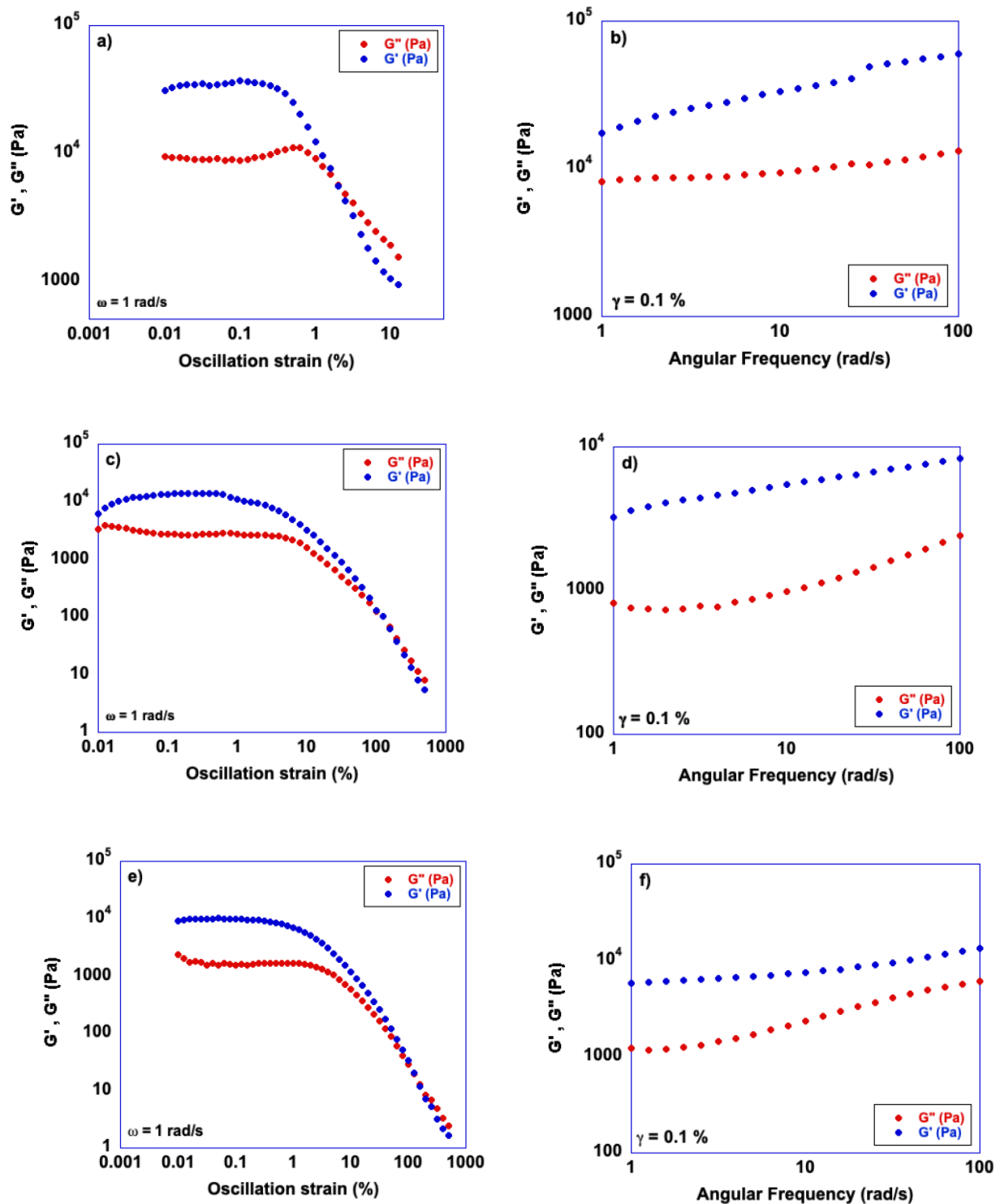


Figure S1. Strain- and frequency sweeps of 3 wt% gels in a), b), [bmpip][NTf₂]; c), d), [bmim][PF₆]; e), f), [bmim][NTf₂];

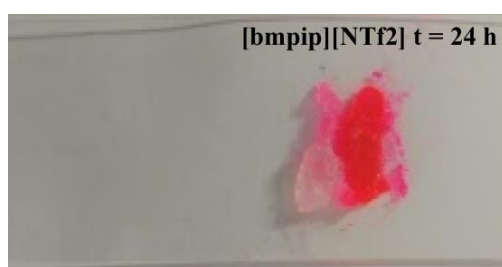
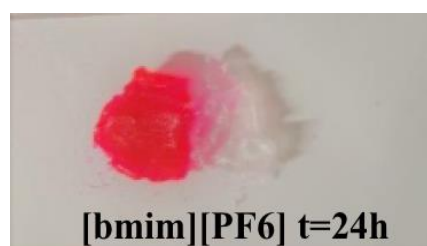
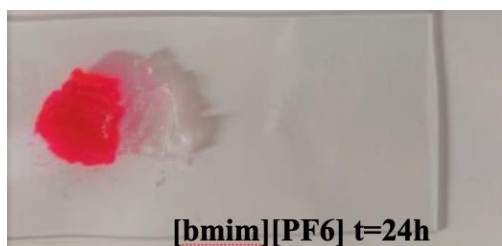


Figure S2. Pictures of the cut halves of gels of DBS (3 wt%) taken after 5 h and 24 h.

Table S1. Removal efficiency as a function of time, for 3 wt% gels of DBS in aliphatic ionic liquids.

[bmpyrr][NTf₂]	
Time (min)	RE (%)^a
5	43
20	43
30	62
50	88
60	90
90	88
180	87
240	90
[bmpip][NTf₂]	
Time (min)	RE (%)
15	22
30	44
90	50
120	66
180	73
240	95
300	93
360	96

[a] Average of duplicate experiments. RE% are reproducible within 4%

Table S2. Removal efficiency as a function of time, for 3 wt% gels of DBS in aromatic ionic liquids.

[bmim][NTf₂]	
Time (min)	RE (%)^a
30	27
60	46
90	53
150	55
180	57
240	56
300	70
360	75
900	> 96
1140	> 96
[bmim][PF₆]	
Time (min)	RE (%)
30	34
60	48
120	51
180	68
240	70
300	78
420	84
1170	>96

[a] Average of duplicate experiments. RE% are reproducible within 4%

Table S3. Removal efficiency relevant to the recycle of 3 wt% gels of DBS in [bmpyrr][NTf₂] and [bmim][PF₆].

[bmpyrr][NTf₂]	
Cycle	RE (%)^a
1	96
2	93
3	>96
4	91
5	88
6	86
7	89
8	72
9	61
[bmim][PF₆]	
Cycle	RE (%)
1	>96
2	>96
3	>96
4	>96
5	>96
6	>96
7	>96
8	>96
9	>96
10	>96
11	>96
12	>96
13	92
14	87
15	77
16	72

[a] Average of duplicate experiments. RE% are reproducible within 4%

Table S4. Removal efficiency relevant to the recycle of 3 wt% gel of DBS in [bmim][NTf₂].

Cycle	RE (%)^a
1	>96
2	>96
3	>96
4	>96
5	>96
6	>96
7	>96
8	>96
9	>96
10	>96
11	>96
12	>96
13	>96
14	>96
15	>96
16	>96
17	>96
18	>96
19	>96
20	>96
21	>96
22	>96
23	92

[a] Average of duplicate experiments. RE% are reproducible within 4%

Table S5. Removal efficiency relevant to the recycle of 3 wt% gel of DBS in [bmipip][NTf₂].

Cycle	RE (%)^a
1	>96
2	>96
3	>96
4	93
5	>96
6	95
7	93
8	>96
9	>96
10	>96
11	>96
12	>96
13	>96
14	>96
15	93
16	94
17	95
18	95
19	91
20	93
21	96
22	91
23	95
24	>96
25	95
26	>96
27	>96
28	93
29	89
30	89
31	92
32	86
33	84
34	86
35	87
36	90
37	86
38	85
39	82
40	80
41	78

[a] Average of duplicate experiments. RE% are reproducible within 4%

Table S6. Adsorption capacities and equilibrium concentrations for % gels of DBS in aromatic ILs.

[bmim][NTf₂]	
C_e (mg/L)	Q_e (mg/g)
25	41
74	44
209	49
393	47
433	163
438	264
548	344
[bmim][PF₆]	
C_e (mg/L)	RE (%)
82	24
210	46
317	63
405	128
582	256

Table S7. Adsorption capacities and equilibrium concentrations for % gels of DBS in aliphatic ILs.

[bmpyrr][NTf₂]	
C_e (mg/L)	Q_e (mg/g)
80	30
168	36
213	39
478	62
654	81
[bmpip][NTf₂]	
C_e (mg/L)	RE (%)
210	48
360	98
478	160
506	171
604	214