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Supporting Information

Selective separation of furfural and hydroxymethylfurfural from an aqueous solution using a supported hydrophobic deep eutectic solvent liquid membrane

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Figure S11. Plot of $ln[(C_0 - 2C_r)/C_0]$ vs. operation time for the transport of FF/HMF through the different deca-men-SLMs: (A) 1wt%FF/HMF; (B) 2wt% FF/HMF; (C) 3wt% FF/MF; (black) PP2E HF; (blue) M3203B; (green) 16P10A; (square) HMF; (triangle) FF.

Figure S12. Plot of $ln[(C_0 - 2C_r)/C_0]$ vs. operation time for the transport of FF/HMF through the different thy-lid-SLMs: (A) 1wt%FF/HMF; (B) 2wt% FF/HMF; (C) 3wt% FF/MF; (black) PP2E HF; (blue) M3203B; (green) 16P10A; (square) HMF; (triangle) FF.

Stability of the SLMs



Figure S1. Weight loss (%) of the SLMs in air (square) and in time of transport experiment (triangle) based on different DESs and membrane support: (A) deca-N8888Br; (B) deca-thy; (C) deca-men; (D) thy-lid; (black) PP2E HF; (blue) M3203B; (green) 16P10A.

Table S1. EDX results of the deca-N888Br-SLMs: (i) empty, (ii) before diffusion and (iii) after 24 h of diffusion experiments.

				Empty		Before dif	fusion	After diffu	sion
PP2E HF	Element	Element	Element	Atomic	Weight	Atomic	Weight	Atomic	Weight
	Number	Symbol	Name	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.
	6	С	Carbon	92.80	90.64	81,54	74.18	84.54	77.27
	8	0	Oxygen	7.20	9.36	16,75	12.89	14.66	17.85
	35	Br	Bromine	0.00	0.00	1,72	11.92	0.80	4.88

M3203B	Element	Element	Element	Atomic	Weight	Atomic	Weight	Atomic	Weight
	Number	Symbol	Name	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.
	6	С	Carbon	62.37	55.38	80.95	61.74	81.98	69.20
	8	0	Oxygen	37.61	44.49	14.39	14.62	15.67	17.62
	35	Br	Bromine	0.02	0.14	4.66	23.64	2.35	13.18

16P10A	Element	Element	Element	Atomic	Weight	Atomic	Weight	Atomic	Weight
	Number	Symbol	Name	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.
	6	С	Carbon	83.45	78.85	85.32	66.11	78.40	62.58
	8	0	Oxygen	16.49	20.75	10.13	10.45	17.91	18.58
	35	Br	Bromine	0.06	0.40	4.55	23.44	3.68	18.83

PP2E HF	Empty	
	before diffusion	after diffusion
deca-N8888Br		
deca-thy	3000017 . BY . Start . MO. J. BY . The	
deca-men		
thy-lid	My ver erer mar ver ut og er er ander i de som er er erer i de som er erer i	Na Maria Barangan (Maria Barangan) Sabat da Barangan (Maria Barangan) Sabat da Barangan (Maria Barangan)

Figure S2. SEM pictures of PP2E HF-SLMs: (i) empty, (ii) before and (iii) after 24 h of diffusion experiments.

M3203B	Empty	
	before diffusion	after diffusion
deca-N8888Br		
deca-thy		
deca-men		
	C KEN	
thy-lid		ATTOM Red way way way and a man and a m

Figure S3. SEM pictures of M3203B-SLMs: (i) empty, (ii) before and (iii) after 24 h of diffusion experiments.

16P10A	Empty	
	before diffusion	after diffusion
deca-N8888Br		
deca-thy		ATTRACT AND ADDRESS OF ADDRE
deca-men		
thy-lid		AT2017 KW BOL W TEW mage mod

Figure S4. SEM pictures of 16P10A-SLMs: (i) empty, (iii) before and (iii) after 24 h of diffusion experiments.



Figure S5. Plot of the wt% concentration of FF and HMF in the feed and receiving phase in time for the deca-N8888Br-SLMs: (black) PP2E HF; (blue) M3203B and (green) 16P10A, at different starting concentrations: (A) 1wt% FF/HMF; (B) 2wt% FF/HMF; (C) 3wt% FF/HMF, at 293.2°C (square) HMF; (triangle) FF.



Figure S6. Plot of the wt% concentration of FF and HMF in the feed and receiving phase in time for the deca-thy-SLMs: (black) PP2E HF; (blue) M3203B and (green) 16P10A, at different starting concentrations: (A) 1wt% FF/HMF; (B) 2wt% FF/HMF; (C) 3wt% FF/HMF, at 293.2°C (square) HMF; (triangle) FF.



Figure S7. Plot of the wt% concentration of FF and HMF in the feed and receiving phase in time for the deca-men-SLMs: (black) PP2E HF; (blue) M3203B and (green) 16P10A, at different starting concentrations: (A) 1wt% FF/HMF; (B) 2wt% FF/HMF; (C) 3wt% FF/HMF, at 293.2°C (square) HMF; (triangle) FF.



Figure S8. Plot of the wt% concentration of FF and HMF in the feed and receiving phase in time for the thy-lid-SLMs: (black) PP2E HF; (blue) M3203B and (green) 16P10A, at different starting concentrations: (A) 1wt% FF/HMF; (B) 2wt% FF/HMF; (C) 3wt% FF/HMF, at 293.2°C (square) HMF; (triangle) FF.



Figure S9. Plot of $ln[(C_0 - 2C_r)/C_0]$ vs. operation time for the transport of FF/HMF through the different deca-N8888Br-SLMs: (A) 1wt%FF/HMF; (B) 2wt% FF/HMF; (C) 3wt% FF/MF; (black) PP2E HF; (blue) M3203B; (green) 16P10A; (square) HMF; (triangle) FF.



Figure S10. Plot of $\ln[(C_0 - 2C_r)/C_0]$ vs. operation time for the transport of FF/HMF through the different deca-thy-SLMs: (A) 1wt%FF/HMF; (B) 2wt% FF/HMF; (C) 3wt% FF/MF; (black) PP2E HF; (blue) M3203B; (green) 16P10A; (square) HMF; (triangle) FF.



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Figure S12. Plot of $ln[(C_0 - 2C_r)/C_0]$ vs. operation time for the transport of FF/HMF through the different thy-lid-SLMs: (A) 1wt%FF/HMF; (B) 2wt% FF/HMF; (C) 3wt% FF/MF; (black) PP2E HF; (blue) M3203B; (green) 16P10A; (square) HMF; (triangle) FF.