

Supporting Information

Exploiting the Benefits of Homogeneous and Heterogeneous Biocatalysis: Tuning the Molecular Interaction of Enzymes with Solvents via Polymer Modification

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Table S1. Characterization of PAN used in the preparation of LipA-PAN conjugates.

Polymer Sample Name	Mole Fraction NIPAAm ^a	Polymer M _n ^b (kg/mol)	PDI ^b (M _w /M _n)	Polymer Sample Name	Mol Fraction NIPAAm ^a	Polymer M _n ^b (kg/mol)	PDI ^b (M _w /M _n)
PAN-58	0.583	55.3	1.22	PAN-77	0.774	54.0	1.24
PAN-61	0.614	54.5	1.20	PAN-78	0.783	53.3	1.15
PAN-62	0.623	55.7	1.20	PAN-79	0.790	55.4	1.21
PAN-63	0.630	54.2	1.15	PAN-80	0.801	52.4	1.17
PAN-65	0.651	52.2	1.18	PAN-82	0.824	52.5	1.11
PAN-68	0.679	54.4	1.21	PAN-86	0.860	45.8	1.18
PAN-72	0.723	55.2	1.24	PAN-87	0.872	44.4	1.14
PAN-76	0.759	52.8	1.18	PAN-88	0.882	46.4	1.25

^aDetermined by ¹H NMR. ^bMeasured by GPC calibrated using linear PMMA standards.

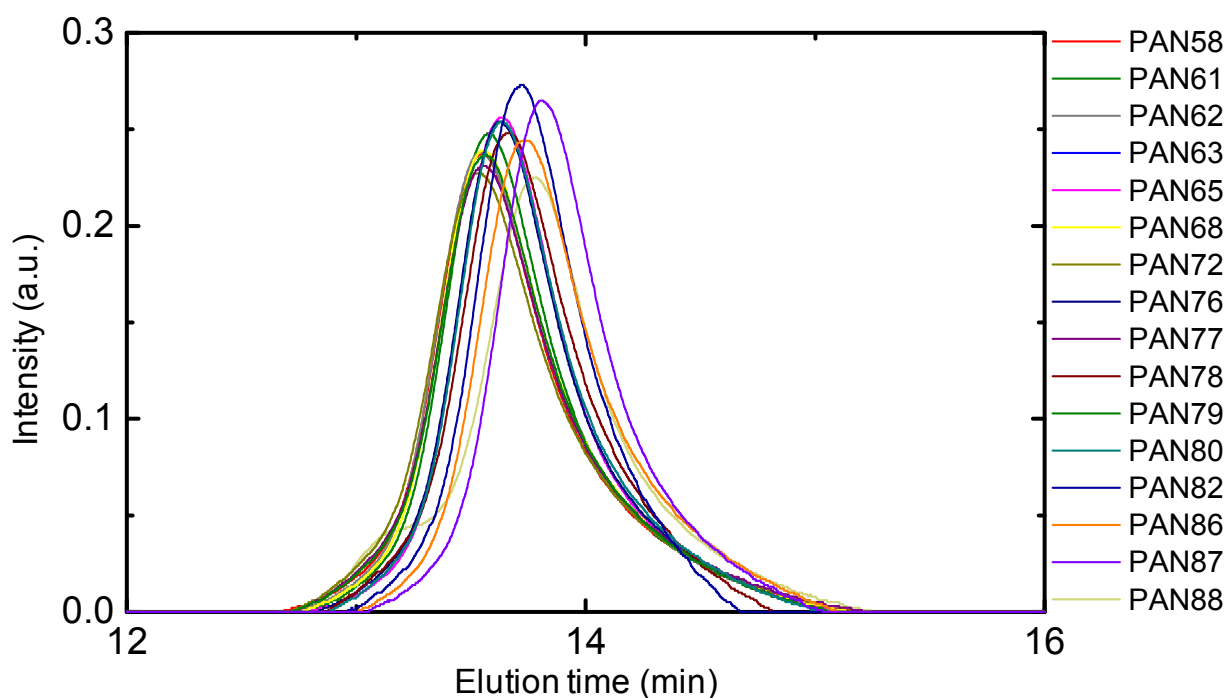


Figure S1. GPC traces of NHS-terminated PAN at 1 mg mL⁻¹ measured in DMSO with a refractive index detector using an EcoSEC HLC-8320GPC (Tosoh) system. For calibration, linear poly(methyl methacrylate) standards were used.

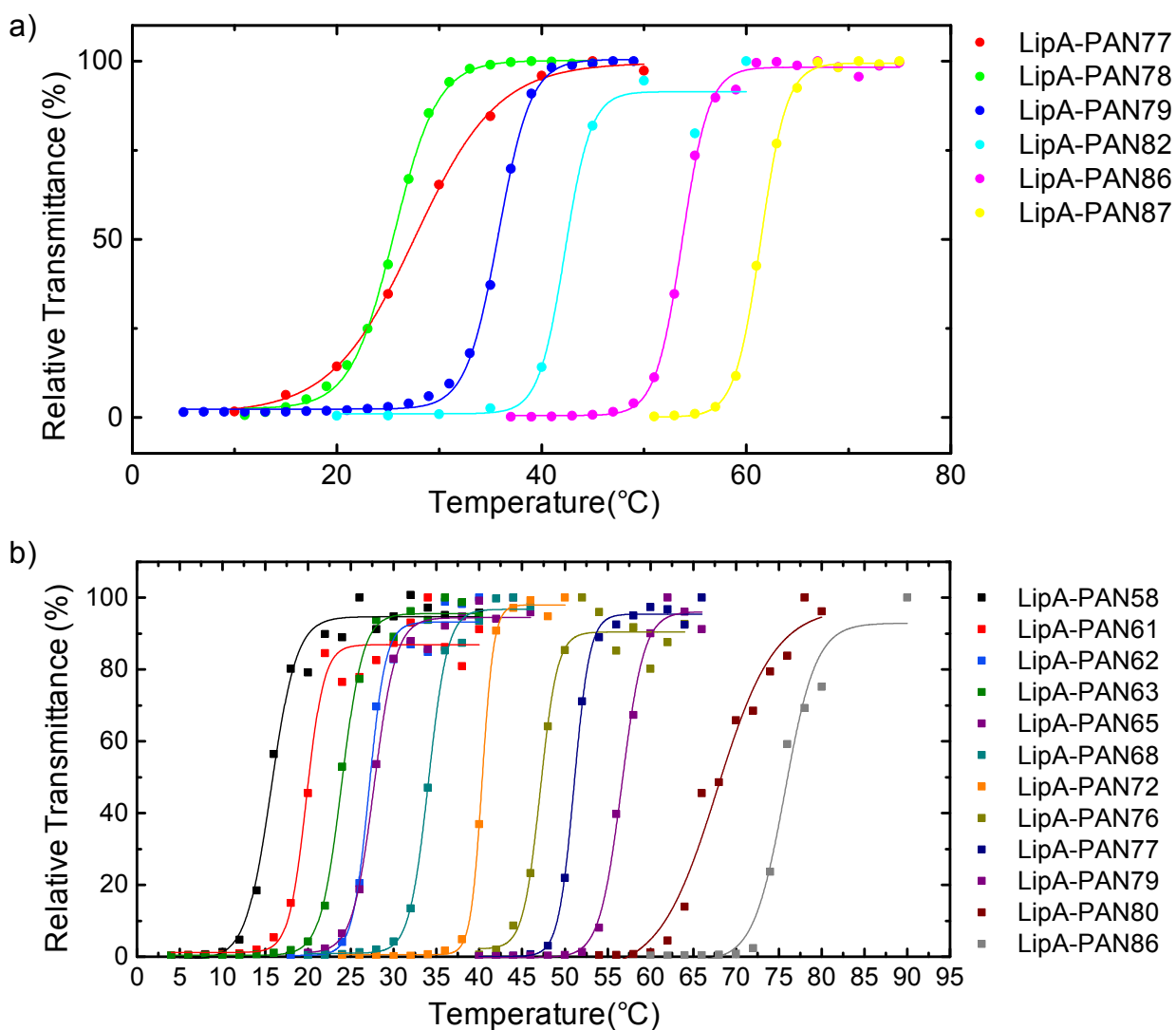


Figure S2. Cloud point curves for all LipA-PAN conjugates at 1 mg mL⁻¹ enzyme concentration in [BMIM][PF₆] without ethanol (a) or containing 1 M ethanol (b). The solid curves represent the sigmoidal fit of the raw curves of relative transmittance versus temperature from which the cloud point was determined.