

Supporting information

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Synthesis of pPrOzi₁₅₀-*b*-pEtOx₅₀ diblock copolymer

Initiation: MeOTf 0.0722 g (0.44 mmol; 1 eq)

1. Block: PrOzi 2.77 g (21.8 mmol; 50 eq)

2. Block: EtOx 2.16g (21.8 mmol; 50 eq)

Termination: EPC 0.22 g (1.42 mmol; 3.2 eq) (Ethyl isonipicotate)

Solvent Benzonitrile 9 ml

Yield: 4.5 g of white powder 84%

GPC (HFIP) $M_n = 4.5$ kg/mol; $\bar{D} = 1.3$

¹H-NMR $M_n = 11.3$ kg/mol (pPrOzi₄₇- pEtOx₅₂)

Synthesis of pPrOzi₁₀₀-*b*-pEtOx₁₀₀ diblock copolymer

Initiation: MeOTf 0.0718 g (0.437 mmol; 1 eq)

1. Block: PrOzi 5.56 g (43.79 mmol; 100 eq)

2. Block: EtOx 4.34 g (43.79 mmol; 100 eq)

Termination: BocPip 0.245 g (1.31 mmol; 3 eq)

K₂CO₃ 0.06 g (0.43 mmol; 1 eq)

Solvent Benzonitrile 10 ml

Yield: 7 g of white powder 70 %

GPC (HFIP) $M_n = 9.1$ kg/mol; $\bar{D} = 1.40$

¹H-NMR $M_n = 25.9$ kg/mol (pPrOzi₁₁₂- pEtOx₁₁₇)

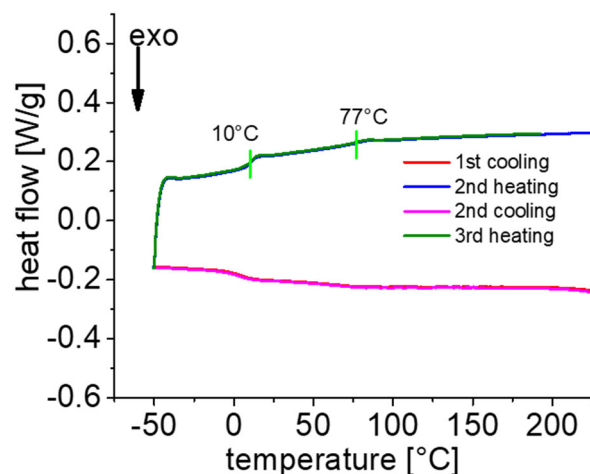


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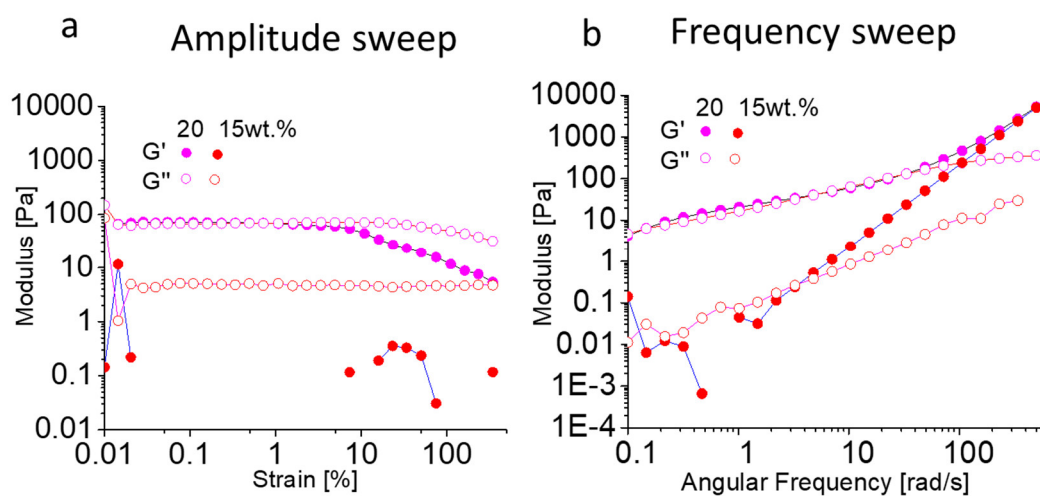


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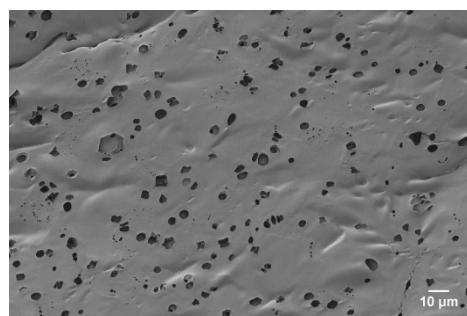


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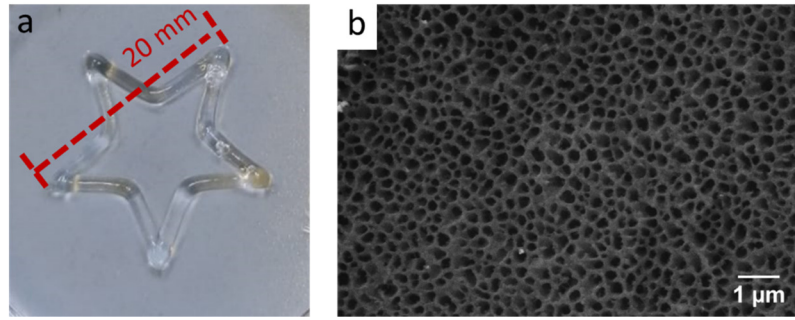


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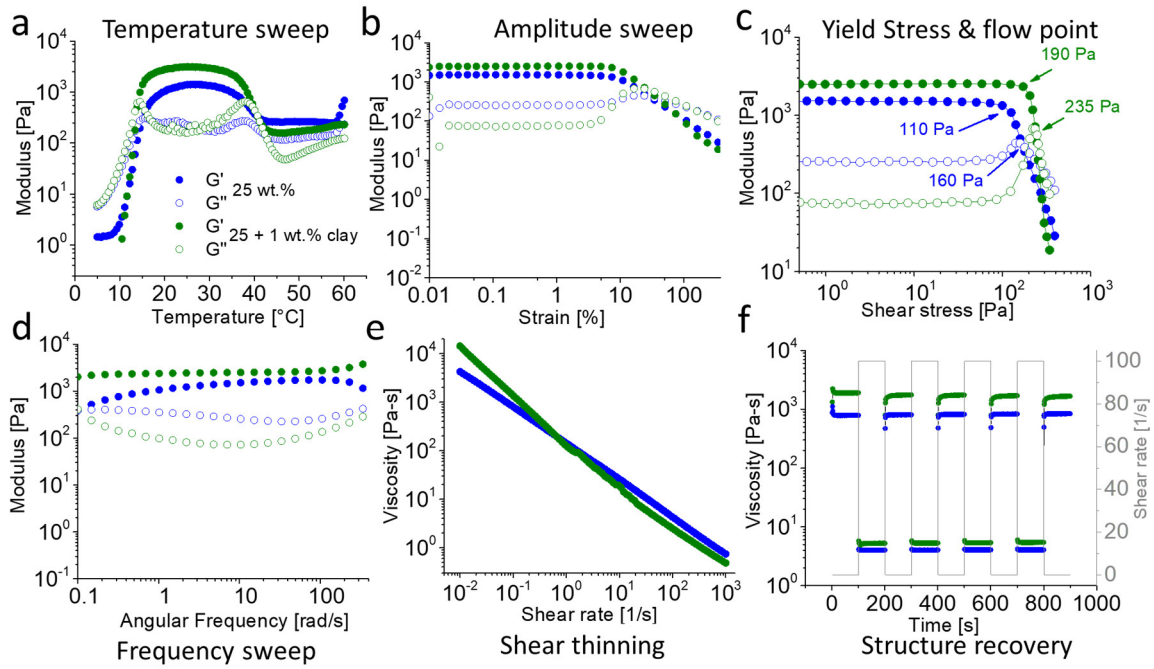


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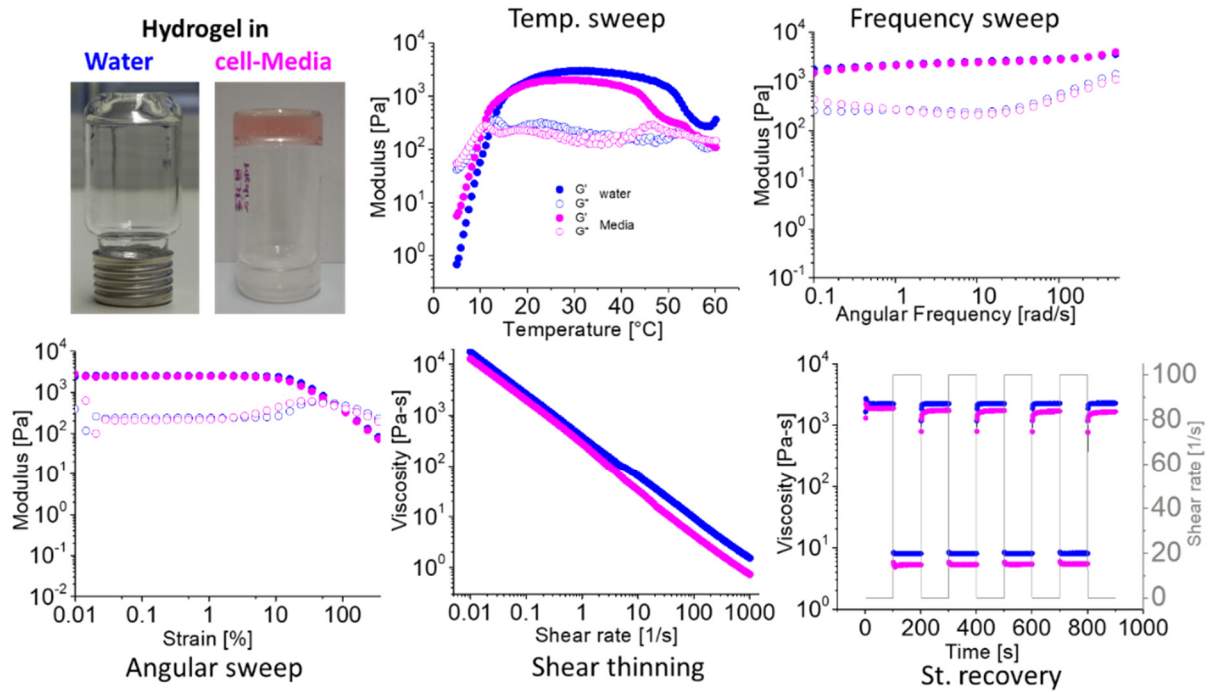


Figure S6. Visual appearance of 30 wt.% pPrOzi100-*b*-pEtOx100 diblock copolymer hydrogel in water (blue) and cell culture media (magenta). Comparison of rheological properties of hydrogel prepared in water and media including temperature dependent sweep (from 5 to 60°C), frequency sweep, angular sweep, shear thinning and structure recovery properties (at 25°C).

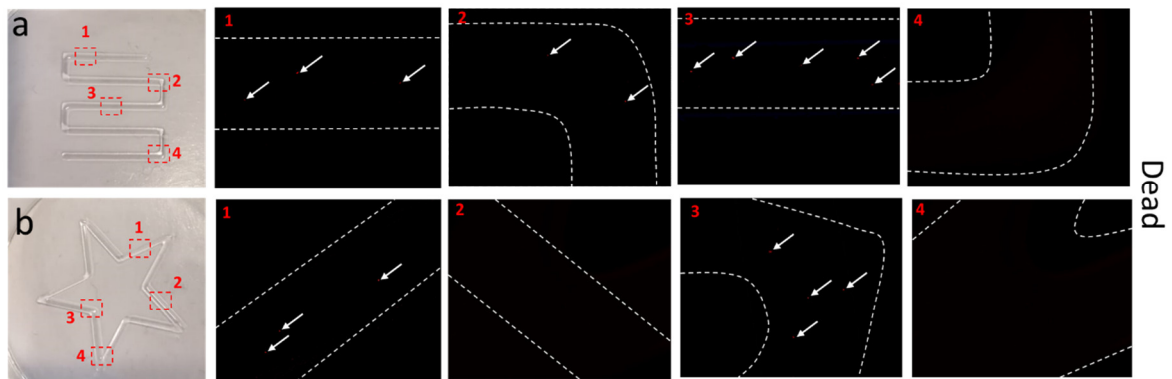


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