Electronic Supplementary Material (ESI) for Soft Matter

Supporting Information

Multiple nucleation events and local dynamics of poly(ε-caprolactone) (PCL) confined to nanoporous alumina

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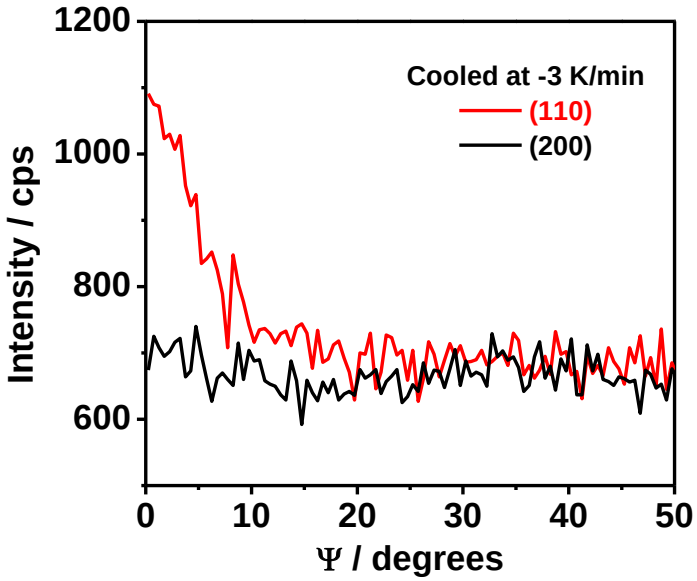

Figure S1. Schulz scan belonging to the (110) and (200) peaks of PCL 8900 inside AAO with a pore diameter of 65 nm. The sample was cooled at -3 K/min from the melt. Schulz scans were measured with fixed Θ and 2Θ angles by tilting the AAO about the Ψ axis by a tilt angle Ψ. The Ψ axis lay in the scattering plane (normal to the AAO pore axes) and was oriented perpendicular to the Θ/2Θ axis. The Schulz-Scans yielded intensity profiles $I(\Psi)$ representing orientation distributions of sets of lattice planes belonging to the reflection at the selected 2Θ angles relative to the AAO surface. Hence, the obtained $I(\Psi)$ profiles corresponded to azimuthal intensity profiles along the Debye ring belonging to the fixed scattering angle Θ. The Schulz scan he calculated value of the Hermans orientation parameter for the (110) reflection is ≈ 0.95 suggesting high orientational order.

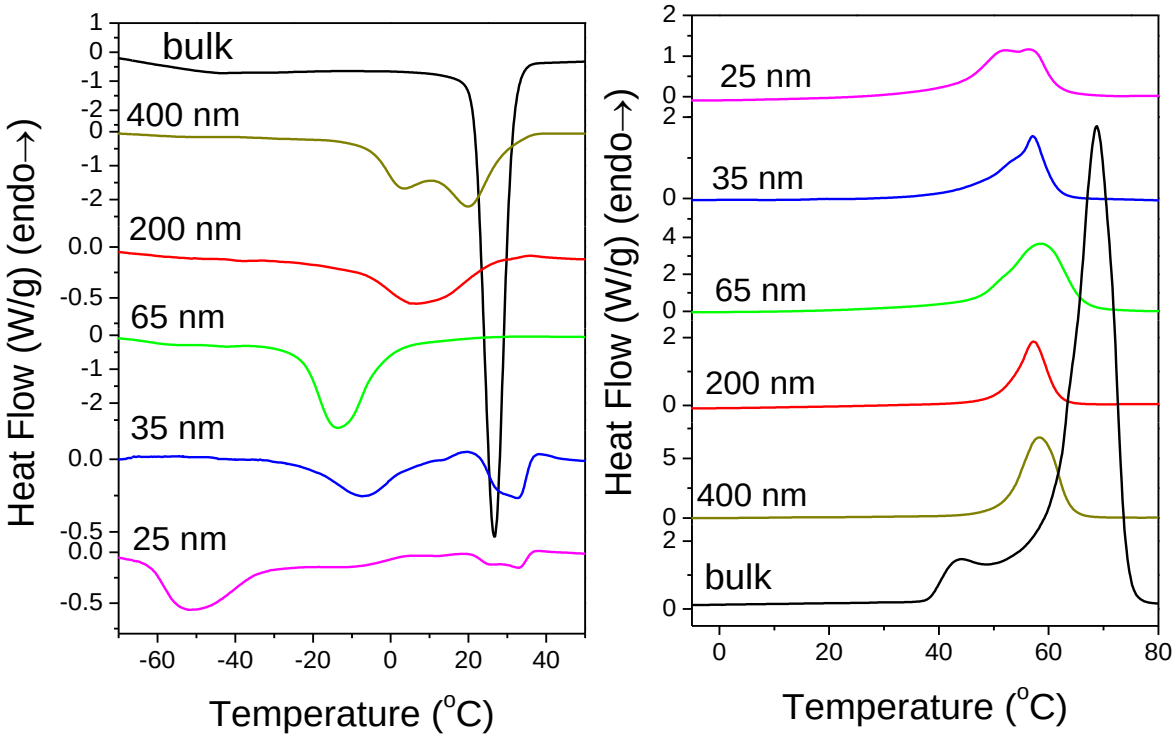

Fig. S2. Cooling (left) and subsequent heating (right) thermograms of bulk PCL-36000 and PCL-36000 located inside self-ordered AAO with pore diameters ranging from 200 nm to 25 nm. (heating/cooling rate 10 K/min). `

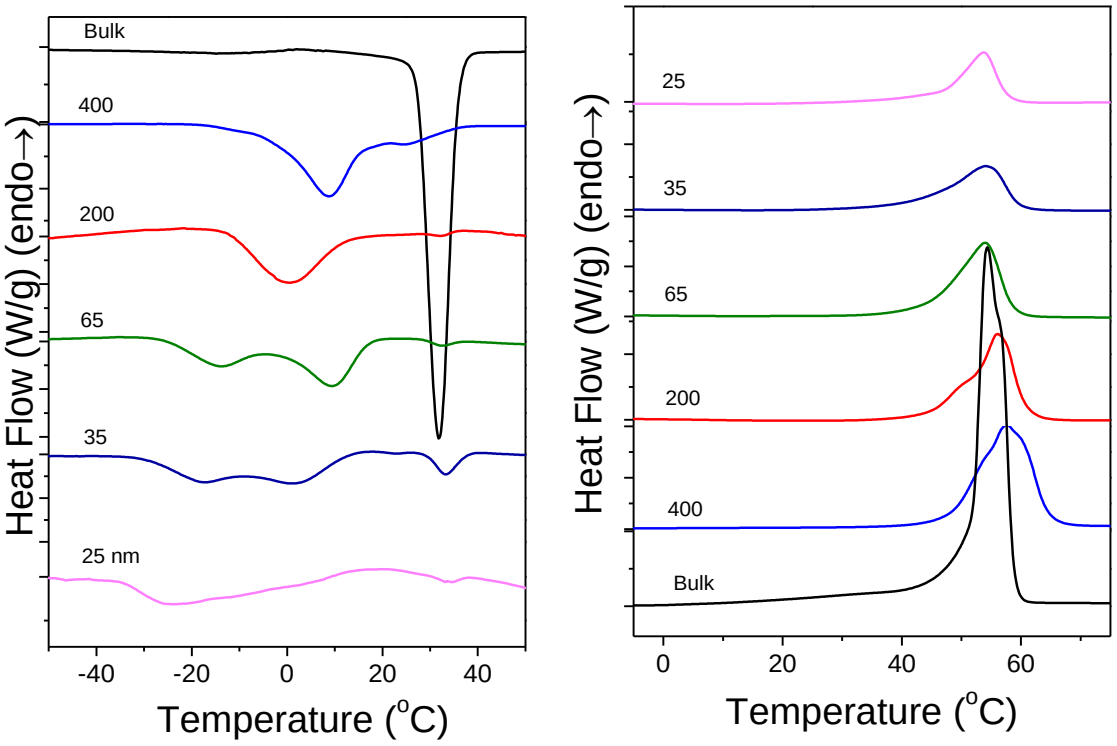

Fig. S3. Cooling (left) and subsequent heating (right) thermograms of bulk PCL-7700 and PCL-7700 located inside surface-modified with ODPA self-ordered AAO with pore diameters ranging from 400 nm to 25 nm (heating/cooling rate 10 K/min).