Description of testing methods

Gel permeation chromatography was conducted on a Breeze QS HPLC (Waters) equipped with three different columns connected in series (HR-1, HR-2 and HR-4). Two detectors were employed in this study, a UV (Ultraviolet) Waters 2487 operated at a wavelength of 254 nm and differential refractive index Waters 2414. Tetrahydrofuran (THF) was used as eluent at a flow rate of 0.35 mL/min at 35 °C. The system was calibrated using polystyrene standards with different Mw obtained from Sigma-Aldrich using the universal calibration method.

Mechanical properties of the copolymer **III-IV** such as tensile strength and elongation at break were measured according to ISO 527-2 using the Universal Testing Machine Instron 5966 with sample dimensions: 0.1 x 0.01 x 0.00035 m. At least 5 samples were used for each composition.

Adhesion of copolymers to metals was tested according to ISO 4624:2002 by the destructively testing of the bonded coupons using PosiTest AT-M Manual Adhesion Tester (DeFelsko, USA). Average of 5 measurements is reported.

Drop Shape Analyzer DSA100E KRUSS was employed to study the contact angle of a water droplet on the block-copolymers films by the sessile drop method. Average of 5 measurements taken on polymer samples coated on 5 separate metal substrates is reported as the water contact angle.

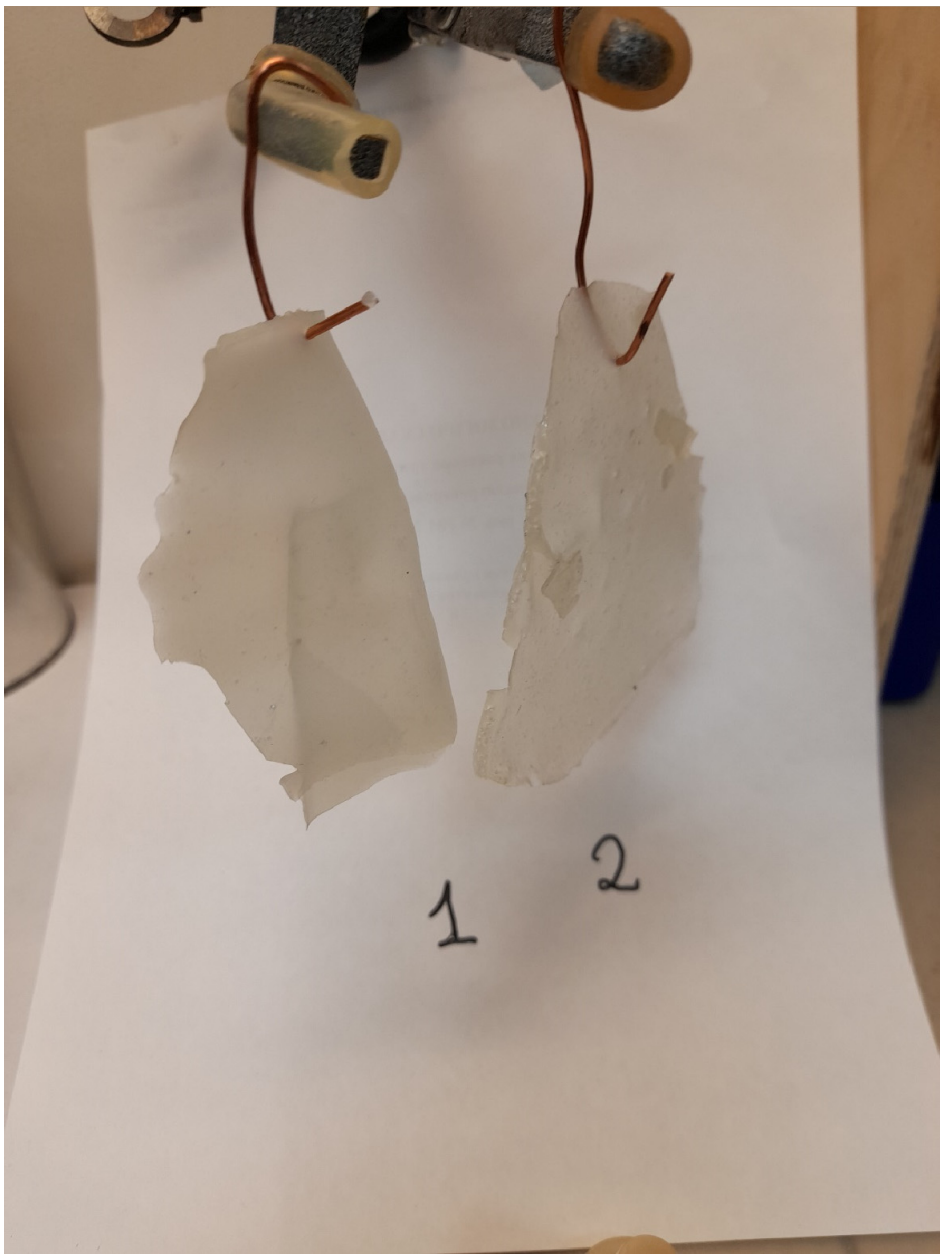


Figure S1. The films of modified copolymers **III** (1) and **IV** (2).

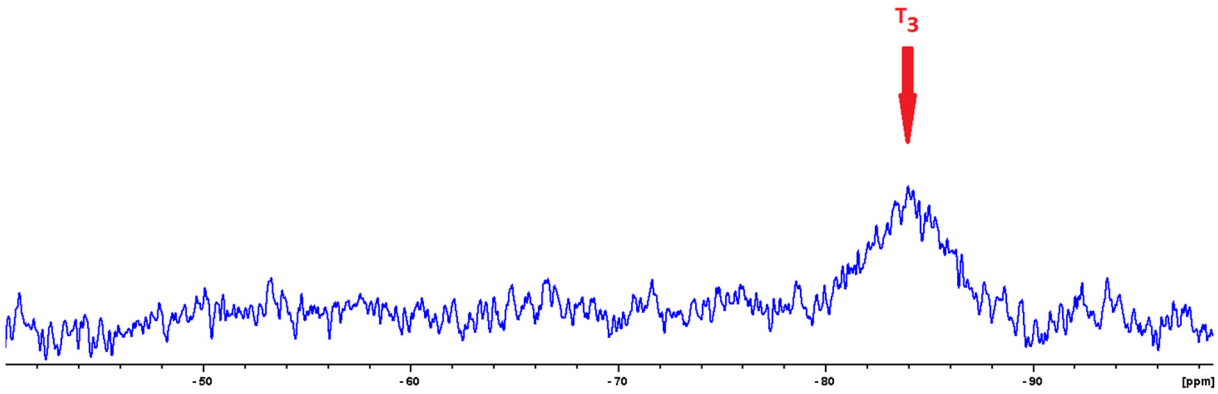


Figure S2. 29 Si NMR spectrum of copolymer III after modification in chloroform- d solution.

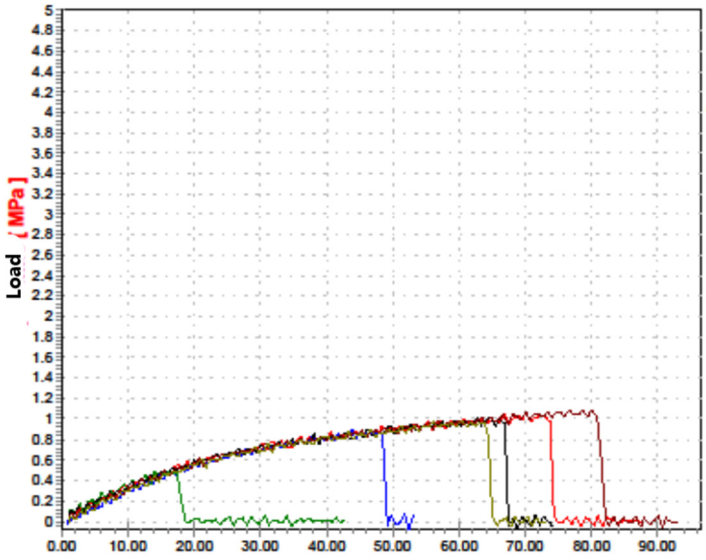


Figure S3. Mechanical testing of copolymer III before modification

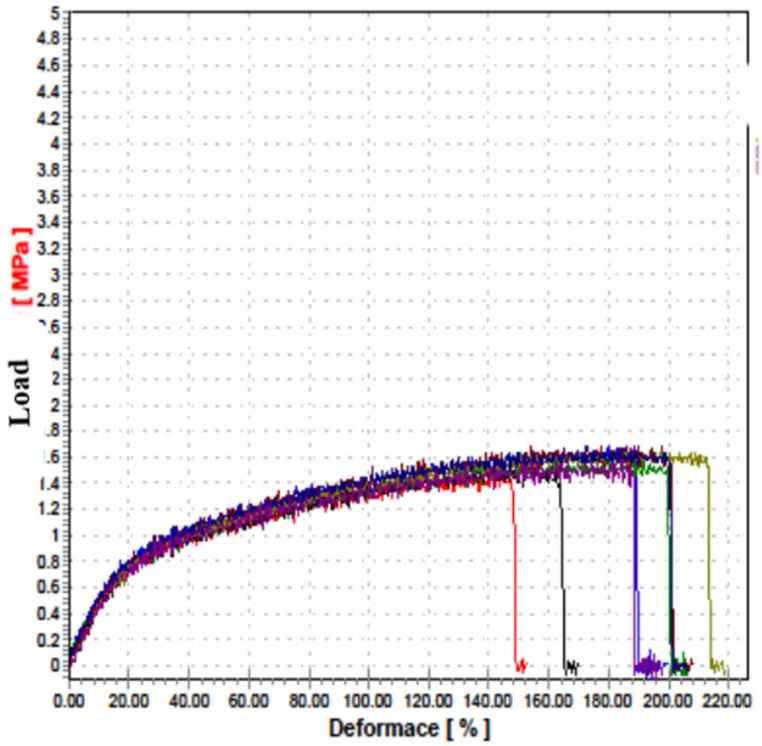
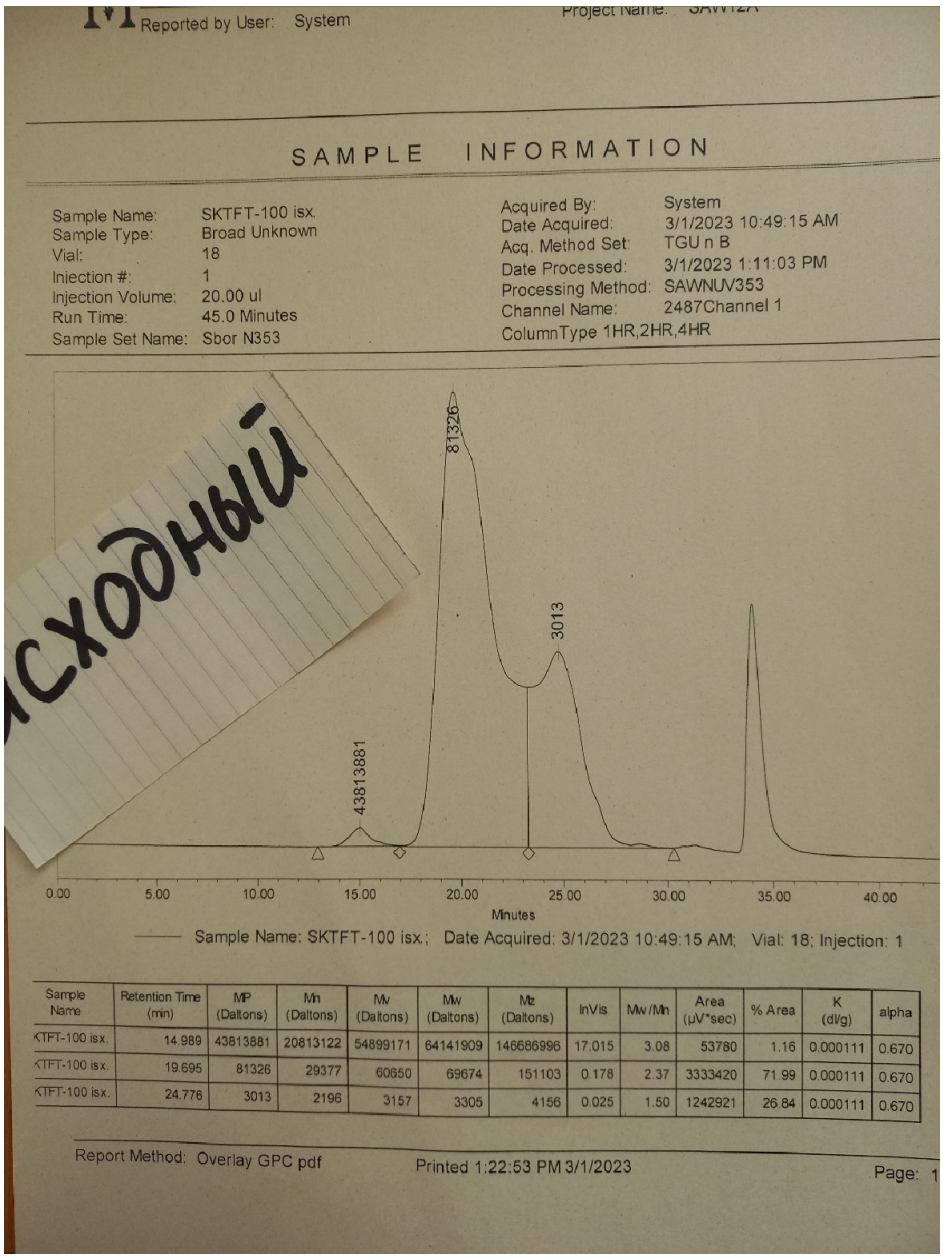
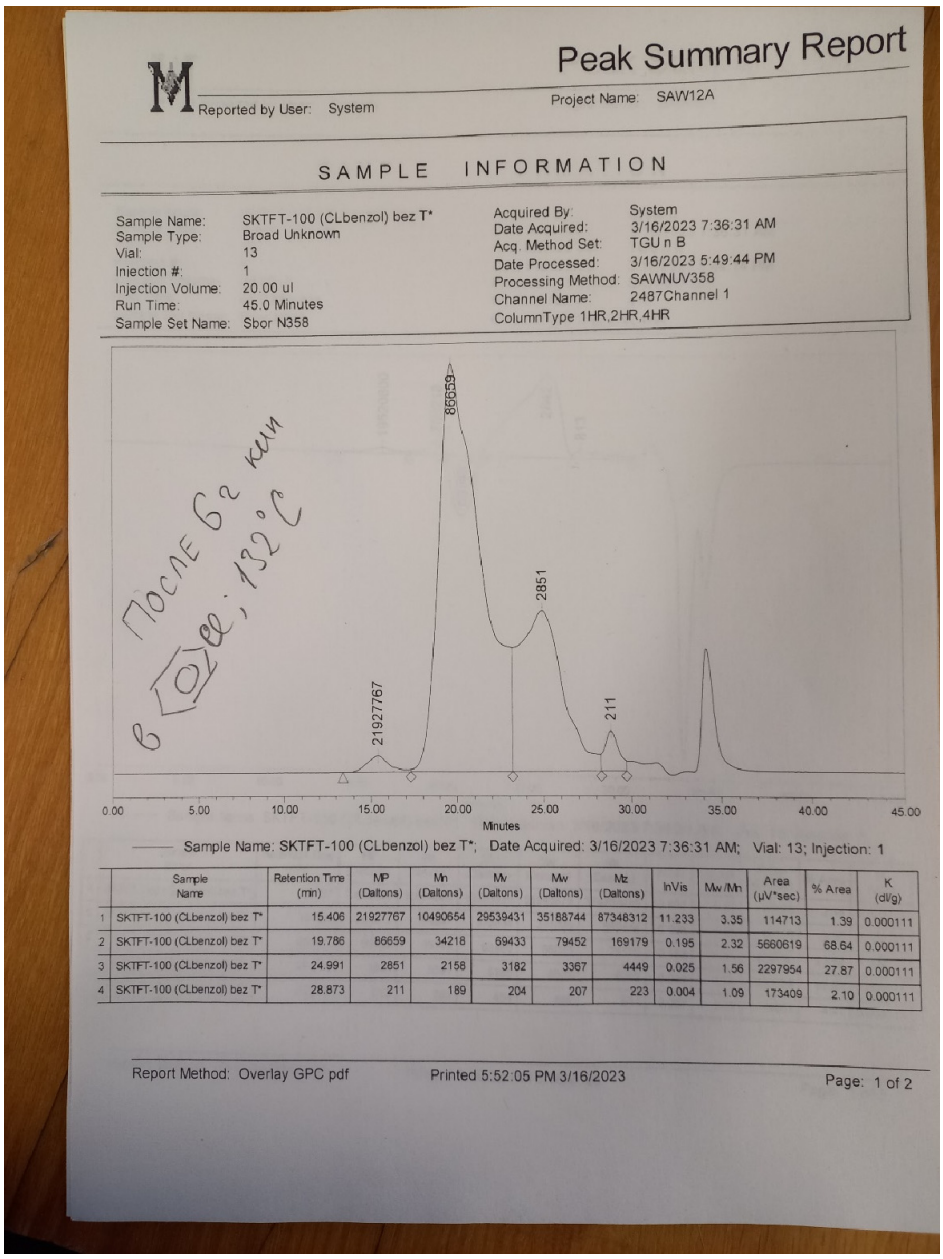


Figure S4. Mechanical testing of copolymer III after modification



Sample Name	Retention Time (min)	MP (Daltons)	Mn (Daltons)	Mv (Daltons)	Mw (Daltons)	Mz (Daltons)	InVis	Mw/Mn	Area (µV*sec)	% Area	K (dl/g)	alpha
KTFT-100 isx.	14.989	43813881	20813122	54899171	64141909	146686996	17.015	3.08	53780	1.16	0.000111	0.670
KTFT-100 isx.	19.695	81326	29377	60650	69674	151103	0.178	2.37	3333420	71.99	0.000111	0.670
KTFT-100 isx.	24.776	3013	2198	3157	3305	4156	0.025	1.50	1242921	26.84	0.000111	0.670

Figure S5. The chromatogram of copolymer **IV** before heating (starting copolymer).



Peak Summary Report

Reported by User: System

Project Name: SAW12A

SAMPLE INFORMATION

Sample Name:	SKTFT-100 (CLbenzol) bez T*	Acquired By:	System
Sample Type:	Broad Unknown	Date Acquired:	3/16/2023 7:36:31 AM
Vial:	13	Acq. Method Set:	TGU n B
Injection #:	1	Date Processed:	3/16/2023 5:49:44 PM
Injection Volume:	20.00 ul	Processing Method:	SAWNUV358
Run Time:	45.0 Minutes	Channel Name:	2487Channel 1
Sample Set Name:	Sbor N358	ColumnType 1HR,2HR,4HR	

Sample Name: SKTFT-100 (CLbenzol) bez T*; Date Acquired: 3/16/2023 7:36:31 AM; Vial: 13; Injection: 1

	Sample Name	Retention Time (min)	MP (Daltons)	Mn (Daltons)	Mv (Daltons)	Mw (Daltons)	Mz (Daltons)	InVis	Mw/Mn	Area (µV*sec)	% Area	K (dl/g)
1	SKTFT-100 (CLbenzol) bez T*	15.406	21927767	10490654	29539431	35188744	87348312	11.233	3.35	114713	1.39	0.000111
2	SKTFT-100 (CLbenzol) bez T*	19.786	86659	34218	69433	79452	169179	0.195	2.32	5660619	68.64	0.000111
3	SKTFT-100 (CLbenzol) bez T*	24.991	2851	2156	3182	3367	4449	0.025	1.56	2297954	27.87	0.000111
4	SKTFT-100 (CLbenzol) bez T*	28.873	211	189	204	207	223	0.004	1.09	173409	2.10	0.000111

Report Method: Overlay GPC pdf

Printed 5:52:05 PM 3/16/2023

Page: 1 of 2

Figure S6. The chromatogram of copolymer IV after heating at 132ºC in chlorobenzene at 6 hours.