

Supplementary Material

Thermal Transitions and Structural Characteristics of Poly(3,4-ethylenedioxythiophene/cucurbit[7]uril) Polypseudorotaxane and Polyrotaxane Thin Films

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1. The technical parameters of spin coating films

The investigated films were prepared by spin-coating and heating at 180 °C for 10 min and then cooled to ambient temperature from filtered DMSO/H₂O 1/1 v/v solutions of PEDOT·CB7 PS and PEDOT·CB7 PR compounds (10 mg·mL⁻¹).

Table S1. Summary of spin-coating parameters.

Material	Spinning rate [rpm]	Spinning time [s]	Atmosphere	Annealing Temperature [°C]
PEDOT	1000	60	air	180
PEDOT·CB7-PS				
PEDOT·CB7-PR				

2. DSC analysis

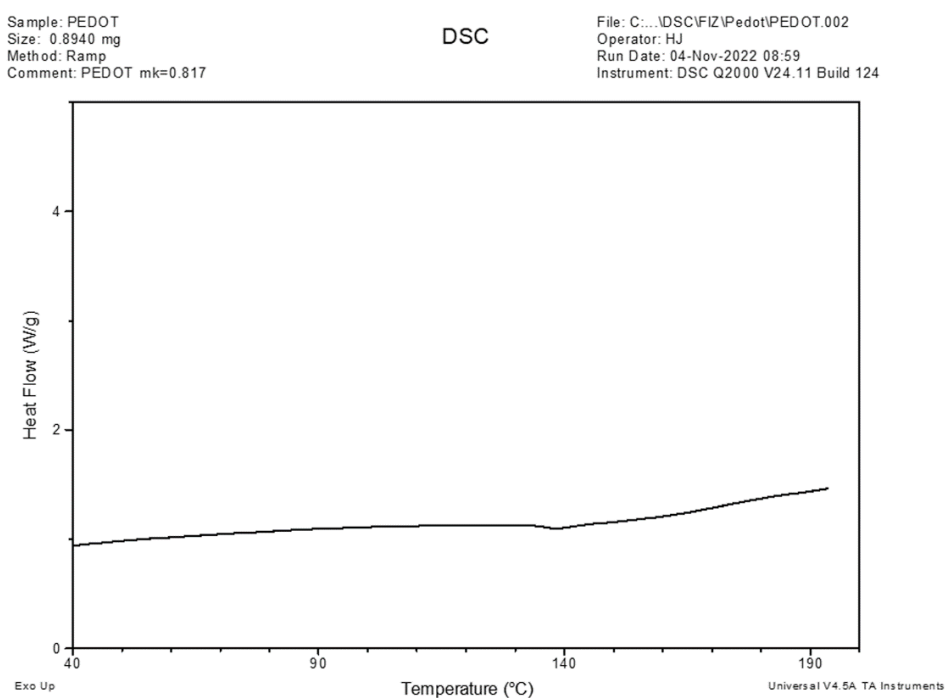
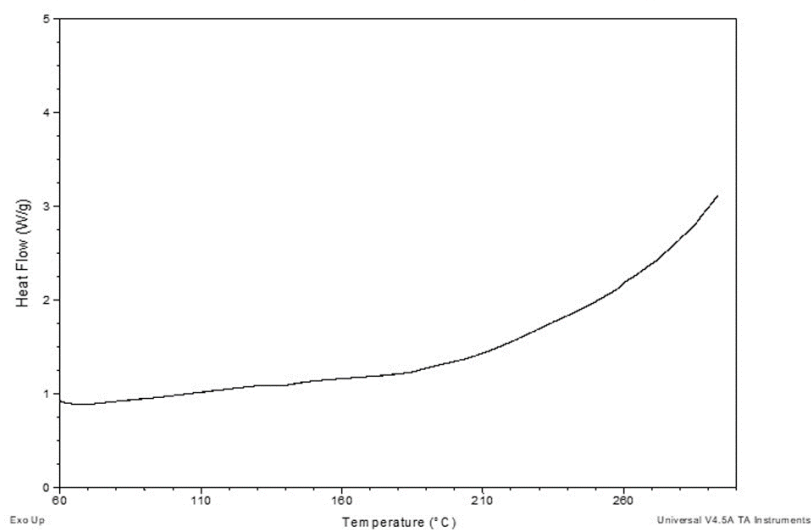


Figure S1. DSC plot of PEDOT.

Sample: PEDOT CB7 PS
Size: 0.8940 mg
Method: Ramp
Comment: PEDOT CB7 PS mk=0.771

DSC

File: C:\...\DSC\FIZ\Pedot\PEDOT CB7 PS.003
Operator: HJ
Run Date: 04-Nov-2022 09:43
Instrument: DSC Q2000 V24.11 Build 124



PEDOT CB7 PS. **I-run.** Heating 20°C/min. The DSC curve shows an endothermic peak at $T_m=78.9^\circ\text{C}$. The vaporization of low molecular weight compounds and water in the sample. $M_k=7.490$

Figure S2. DSC plot of PEDOT CB7-PS.

PEDOT CB7 PR. **I-run.** Heating 20°C/min. $>T=150^\circ$ początki rozkładu, parowania, $>T=250^\circ$ rozkład?, $m_k=0.621\text{mg}$

Sample: PEDOT CB7PR
Size: 0.7000 mg
Method: Ramp
Comment: PEDOT CB7PR mk0.621

DSC

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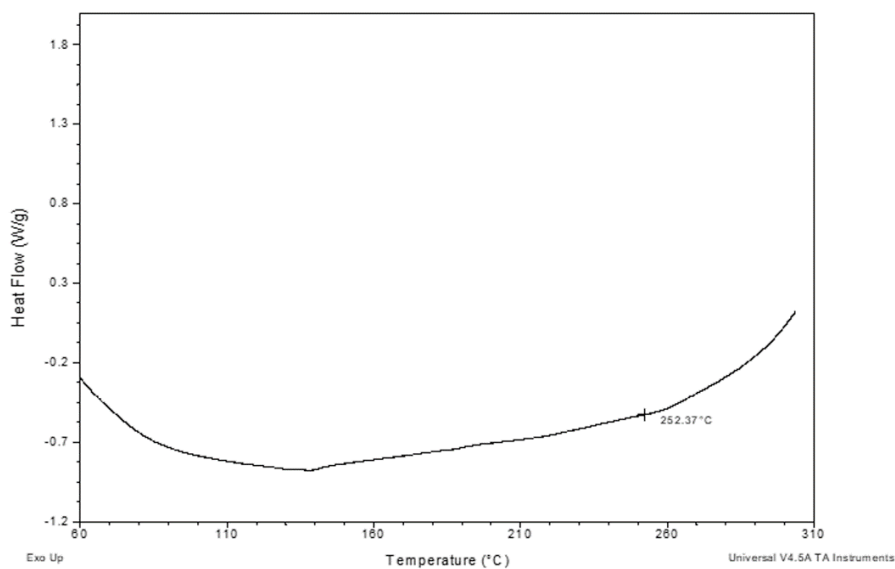


Figure S3. DSC plot of PEDOT CB7-PR.

3. The values of PEDOT crystallites structural parameters

Table S2. The values of PEDOT crystallites structural parameters.

Powder	Space group	Lattice parameters, ICDD, Å	Crystallite size, Å
PEDOT	Orthorhombic	a = 13.50 b = 6.70 c = 10.20	22.1
PEDOT·CB7 PS		a = 12.97 b = 6.80 c = 10.70	34.8
PEDOT·CB7 PR		a = 12.97 b = 6.81 c = 10.40	34.8

4. The mean square root of the roughness of the investigated samples

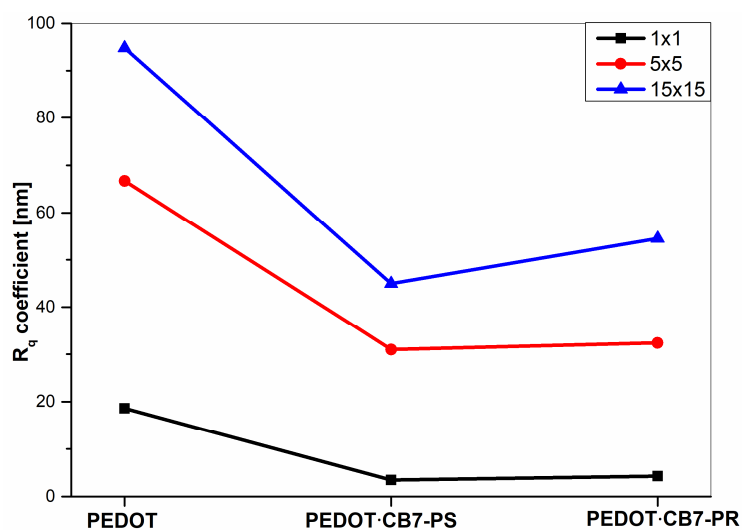


Figure S4. The mean square root of the roughness of the investigated samples.

As can be seen, the roughness coefficient has the lowest value in the case of PEDOT·CB7 PS. High Rq value of the pristine PEDOT could have origin from high crystallites number.