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Memory Characteristics of Anthracene-based Polyimides in Non-volatile Resistive Memory Devices

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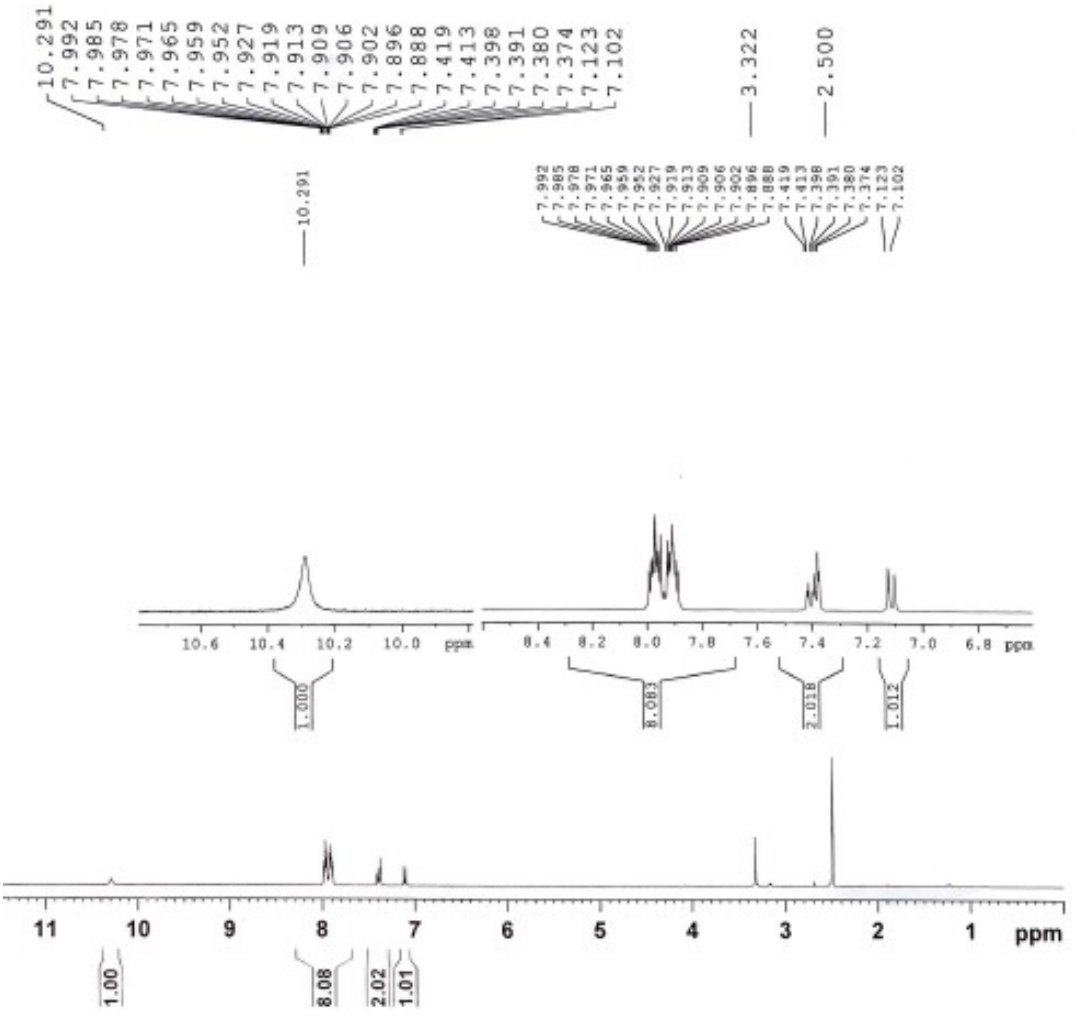

Figure S1. ^{1}H NMR spectrum of Amidol-DP in DMSO-d_6.

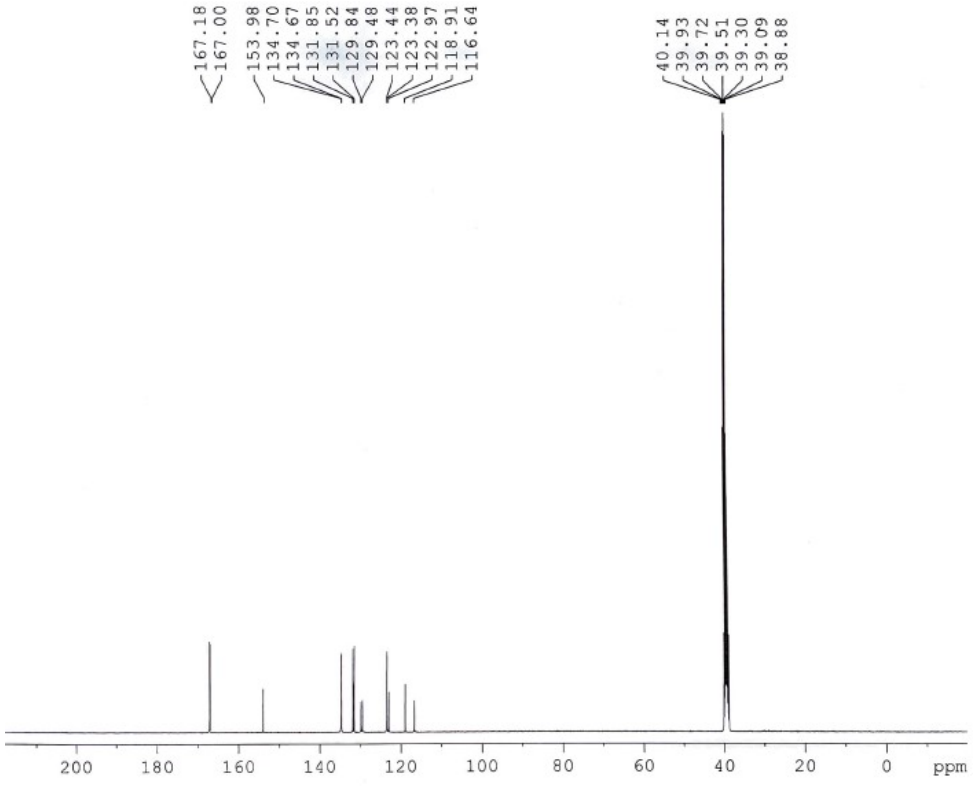

Figure S2. ^{13}C NMR spectrum of Amidol-DP in DMSO-d_6.

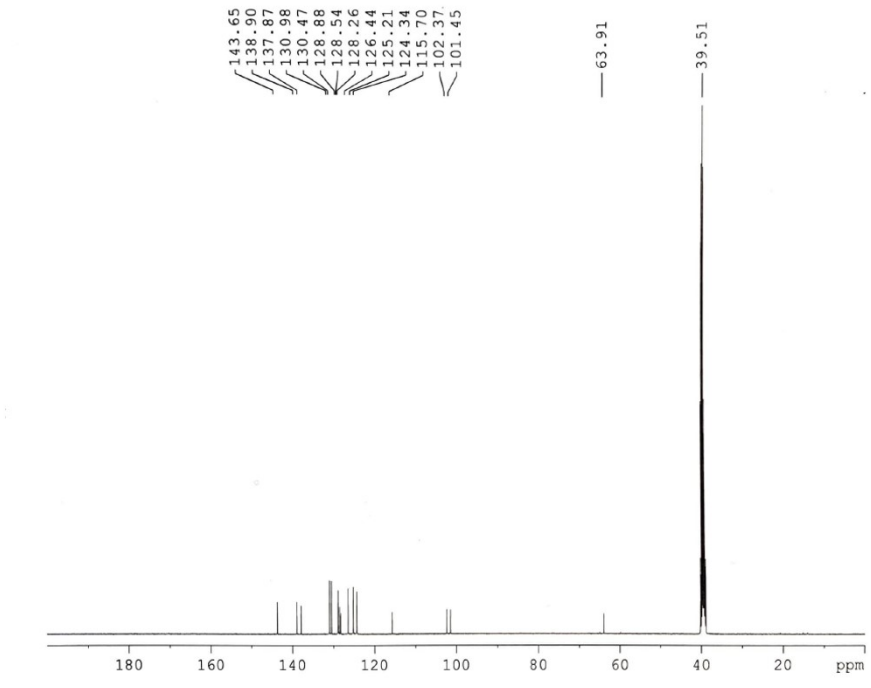

Figure S3. ^{13}C NMR spectrum of AMDA in DMSO-d_6.

Table S1. Solubility of PIs

Polymer	NMP	DMF	DMAc	DMSO	THF
	Chloroform	Acetone	Ethanol	Methanol	MC
6FDA-AMDA PI	+ +	+ +	+ +	+ +	+ +
	- -	+ +	+ -	+ -	+ -
6FDA-AnDA PI	+ +	+ +	+ +	+ +	+ +
	- -	- -	- -	- -	- -

[a] Solubility was tested with a 10 mg sample in a 1 mL solvent at 25 ℃.

[b] Solubility: + +, soluble at 25 ℃; + -, partial soluble at 25 ℃, but soluble after heating at 50 ℃; - -, insoluble even in heating at 50 ℃.

Figure S4. Solutions of 6FDA-AMDA PI and 6FDA-AnDA PI in various solvents.

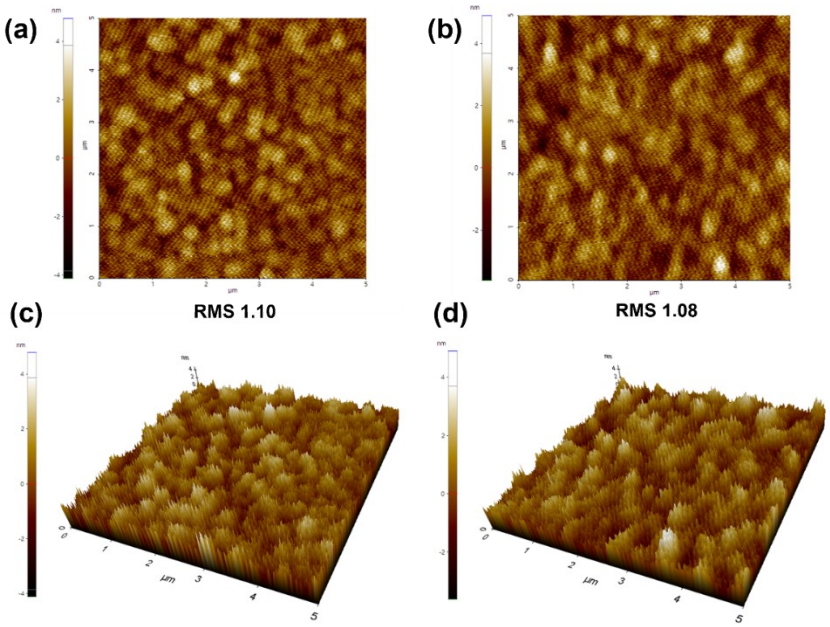

Figure S5. AFM images of (a) a 6FDA-AMDA PI film and (b) a 6FDA-AnDA PI film. 3D-AFM images of (a) a 6FDA-AMDA PI film and (d) a 6FDA-AnDA PI film.

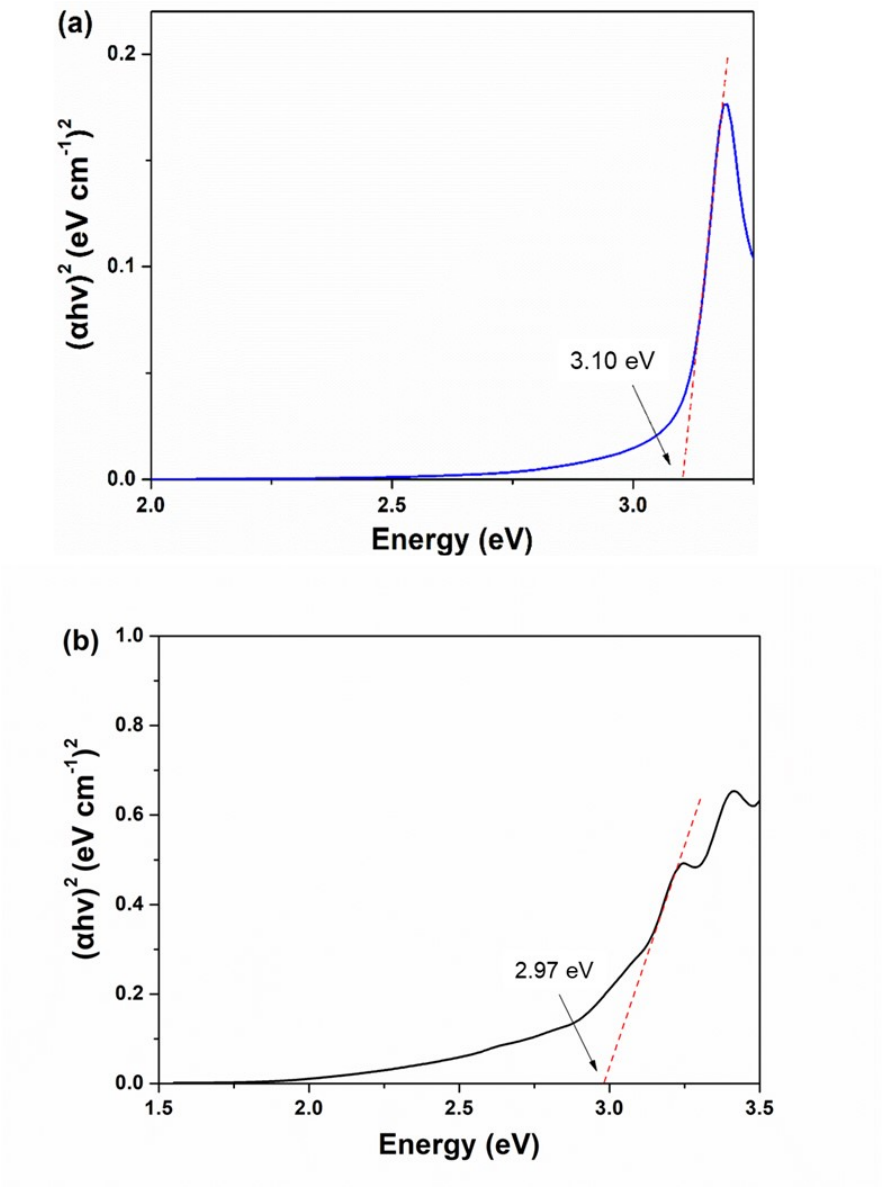

Figure S6. Tauc plot of (a) 6FDA-AMDA PI and (b) 6FDA-AnDA PI.