

## Synthesis and properties of novel block-structured polyarylate containing fluorene: a two-step interface polymerization

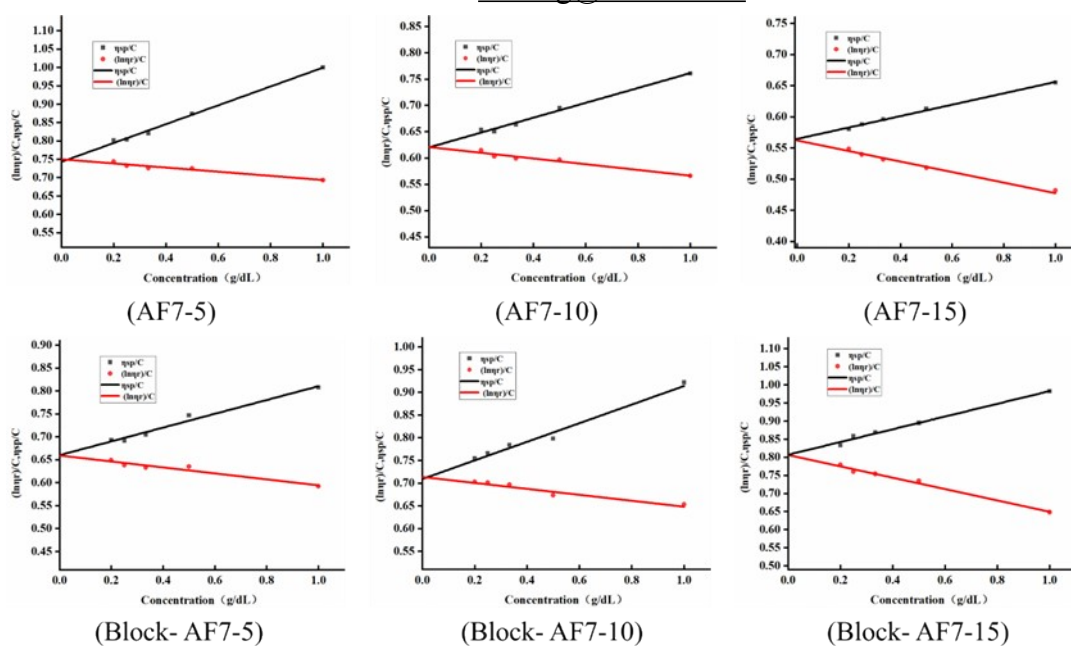
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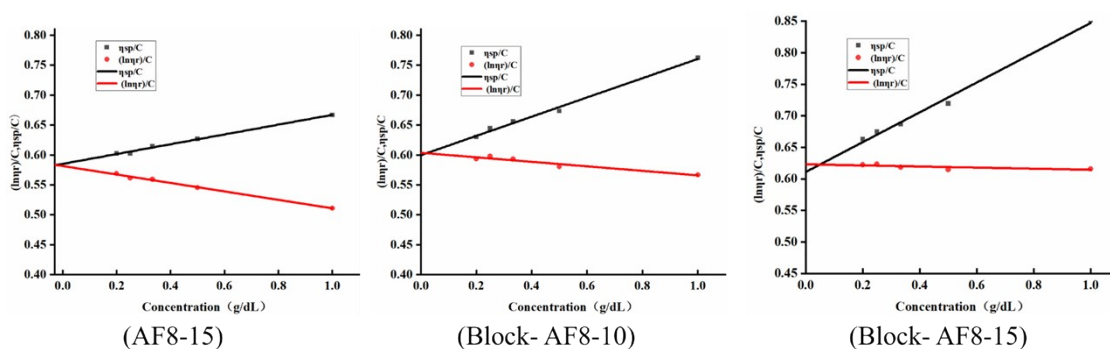
b. School of Materials Science and Engineering, Anhui University of Science and Technology, Huainan 232001, PR China

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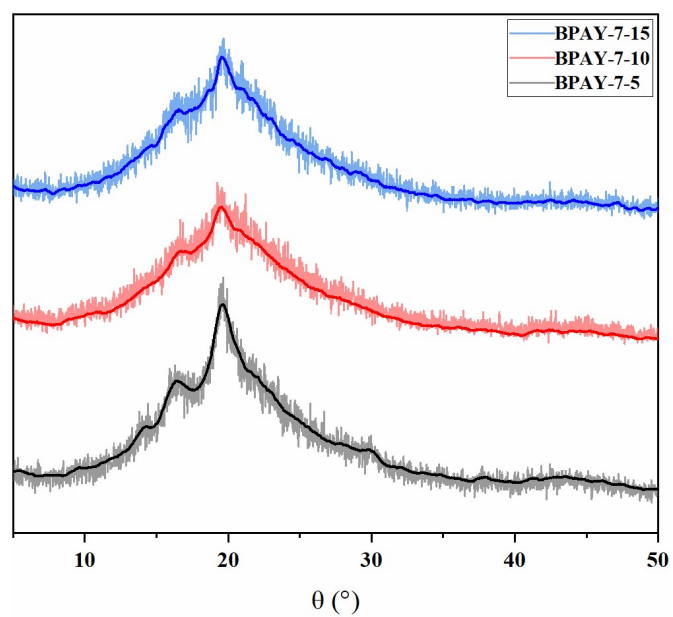
E-mail: [zfwang@aust.edu.cn](mailto:zfwang@aust.edu.cn).



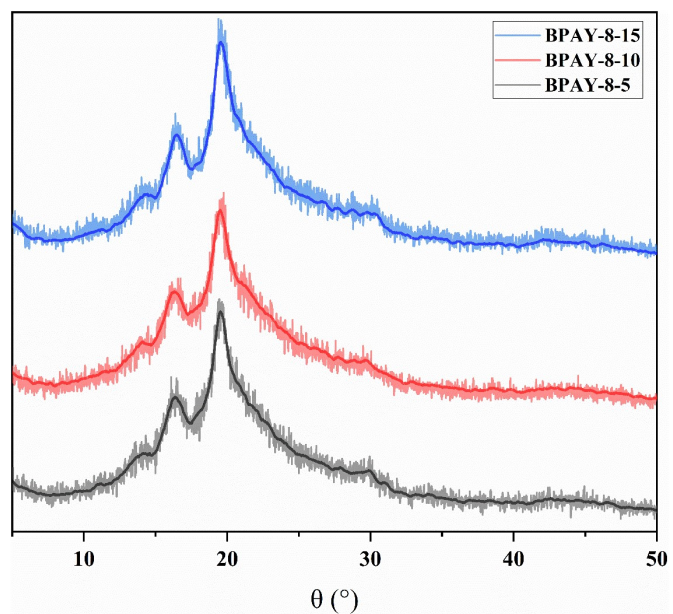
**Figure S1** Ubbelohde viscosity curves of the AF7 series polyarylates



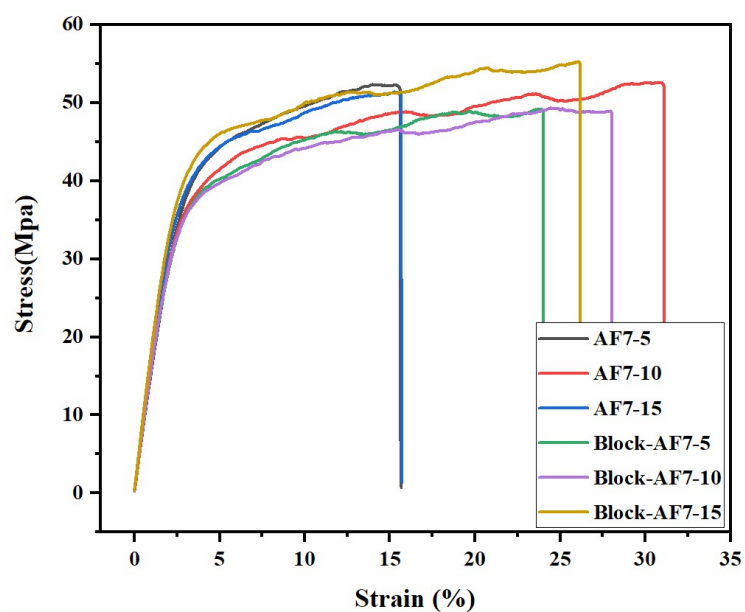
**Figure S2** Ubbelohde viscosity curves of the AF8 series polyarylates



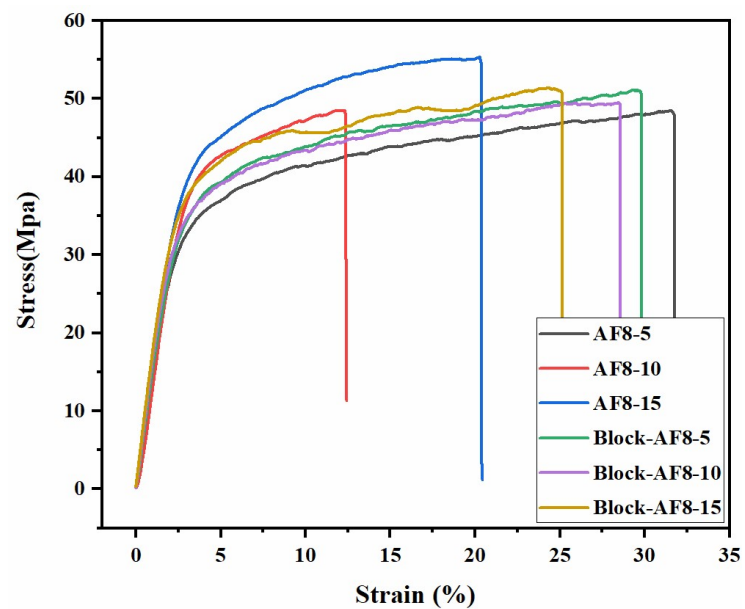
**Figure S3** XRD diffraction patterns of the AF7 prepolymers



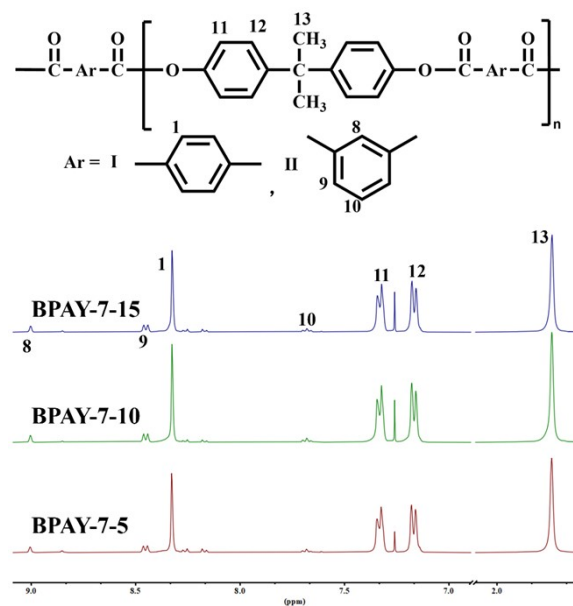
**Figure S4** XRD diffraction patterns of the AF8 prepolymers



**Figure S5** Stress-strain curves of the AF7 series polyarylates



**Figure S6** Stress-strain curves of the AF8 series polyarylates



**Figure S7** <sup>1</sup>H NMR spectrum (in CDCl<sub>3</sub>) of AF7 prepolymers

**Table S1.** Solubility of polyarylates<sup>a</sup>

| Samples       | Solvents          |                                 |     |      |      |     |     |
|---------------|-------------------|---------------------------------|-----|------|------|-----|-----|
|               | CHCl <sub>3</sub> | CH <sub>2</sub> Cl <sub>2</sub> | DMF | DMAc | DMSO | DCE | NMP |
| AF7-5         | +                 | +                               | -   | -    | -    | +-  | +-  |
| AF7-10        | ++                | ++                              | +-  | +-   | -    | +-  | +-  |
| AF7-15        | ++                | ++                              | +-  | +    | +-   | +-  | +-  |
| Block- AF7-5  | +                 | +                               | +-  | +    | -    | +-  | +-  |
| Block- AF7-10 | ++                | ++                              | +-  | +    | -    | +-  | +-  |
| Block- AF7-15 | ++                | ++                              | +-  | +    | +-   | +-  | +-  |
| AF8-5         | +-                | -                               | -   | -    | -    | -   | -   |
| AF8-10        | +                 | +-                              | -   | -    | -    | -   | -   |
| AF8-15        | ++                | ++                              | +-  | +-   | +-   | +-  | +-  |
| Block- AF8-5  | +                 | +-                              | -   | +-   | -    | -   | -   |
| Block- AF8-10 | ++                | +                               | +-  | +    | -    | +-  | +-  |
| Block- AF8-15 | ++                | ++                              | +-  | +    | +-   | +-  | +-  |

a) ++: soluble at room temperature(>1000 mg), +: Partial dissolution(500-1000 mg)

+-: slight soluble(100-500 mg), -: Completely insoluble(<100 mg)