

## Supporting information

### High performance cross-linked anion exchange membrane based on the aryl-ether free polymer backbones for anion exchange membrane fuel cell application

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#### Captions of ESI

**Figure S1** The water uptake and swelling ratio of the cross-linked AEM: C2-CQASEBS, C4-CQASEBS and C6-CQASEBS at different temperature.

**Figure S2** The hydroxide ion conductivity of the cross-linked AEM: C2-CQASEBS, C4-CQASEBS and C6-CQASEBS at different temperature.

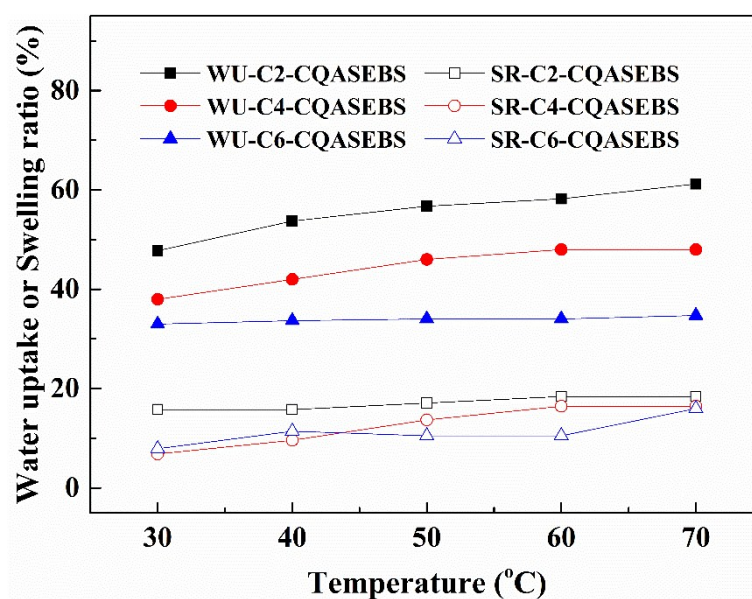


Figure S1 the water uptake and swelling ratio of the cross-linked AEM: C2-CQASEBS, C4-CQASEBS and C6-CQASEBS at different temperature.

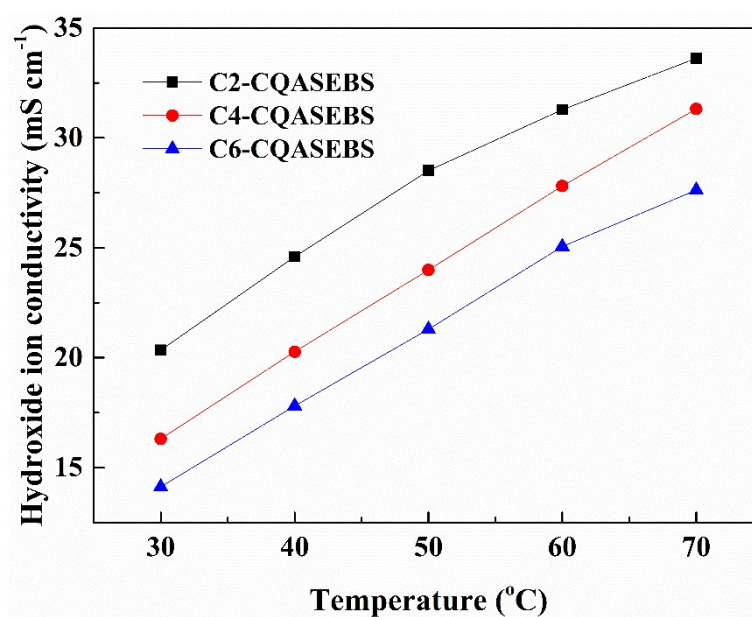


Figure S2 the hydroxide ion conductivity of the cross-linked AEM: C2-CQASEBS, C4-CQASEBS and C6-CQASEBS at different temperature.