**Supplementary Information**

**MOCVD-grown Ga2O3 as a gate dielectric on AlGaN/GaN based heterojunction field effect transistor.**

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**(a)**

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**(b)**

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**(c)**

**Figure S1.**  Frequency-dependent CV measurements of MOSHFET with (a) 20 nm thick gate oxide(b) 30 nm thick gate oxide, and (c) annealed 30 nm thick gate oxide.