Promoting the urea oxidation and water oxidation through interface construction on CeO$_2$@CoFe$_2$O$_4$ heterostructure

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![Fig. S1](image1.png) XPS survey spectrum of CeO$_2$@CoFe$_2$O$_4$/NF and CoFe$_2$O$_4$/NF.

![Fig. S2](image2.png) CV curves of (a) CeO$_2$@CoFe$_2$O$_4$/NF and (b) CoFe$_2$O$_4$/NF at different scan rates from 20 to 100 mV/s in 1.0 M KOH.
**Fig. S3** Electrocatalytic efficiency of O\textsubscript{2} production over CeO\textsubscript{2}@CoFe\textsubscript{2}O\textsubscript{4}/NF.

**Fig. S4** CV curves of (a) CeO\textsubscript{2}@CoFe\textsubscript{2}O\textsubscript{4}/NF and (b) CoFe\textsubscript{2}O\textsubscript{4}/NF at different scan rates from 20 to 100 mV/s in 1.0 M KOH with 0.5 M urea.

**Fig. S5** SEM of (a) CeO\textsubscript{2}@CoFe\textsubscript{2}O\textsubscript{4}/NF and (b) CeO\textsubscript{2}@CoFe\textsubscript{2}O\textsubscript{4}/NF after long-term durability.
Fig. S6 TEM of (a) CeO$_2$@CoFe$_2$O$_4$/NF and (b) CeO$_2$@CoFe$_2$O$_4$/NF after long-term durability.