Sodium-Deficient O3-Na $_{0.9}$ Mn $_{0.4}$ Fe $_{0.5}$ Ti $_{0.1}$ O₂ as a cathode material for

sodium-ion batteries

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Fig. S1 (A) XRD pattern of NMFO and (B) the initial three galvanostatic charge and discharge curves of the NMFO cycled between 2 and 4 V at a rate of 0.1 C.



Fig. S2 (A) The initial three galvanostatic charge and discharge curves of the NMFTO cycled between 1.5 and 4.2 V at a rate of 0.1 C; (B) the cycling performance at a rate of 0.1 C.



Fig. S3 (A) The initial three galvanostatic charge and discharge curves of the NMFTO cycled between 2 and 4.2 V at a rate of 0.1 C; (B) the cycling performance at a rate of 0.1 C.



Fig. S4 The CV curves of NMFTO for the first three cycles between (A) 2.0-4.0 V, (B)

1.5-4.2 V and (C) 2-4.2V.

Table S1 EIS parameters and diffusion coefficient of sodium ion for NMFTO.

Cycles	$R_s(\Omega)$	$R_{ct}(\Omega)$	$\sigma(\Omega cm^2 s^{-0.5})$	$D (cm^2 s^{-1})$	Error (%)
5th	5.0	162	24.4	6.1E-13	1.95