

Efficient charge transport through a metal oxide semiconductor in the nanocomposite film with tris(2,2'-bipyridine)ruthenium(II)

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Supporting Information

Figure S1 The plot of the initial current density (j) at $t = 10$ ms vs E_f in the Cottrell plots of a Ru-WO₃ film.

Figure S2 Cottrell plots in PSCAS measurement of a neat WO₃ film in a 0.1 M KNO₃ aqueous solution (pH = 1.2) as measured with E_f changed.

Figure S3 Cottrell plots in PSCAS measurement of a Ru-WO₃ film and a Ru-Nf film in a potential step from 0.4 V to 1.5 V vs SCE in a 0.1 M KNO₃ aqueous solution (pH = 1.2) as measured at different temperature.

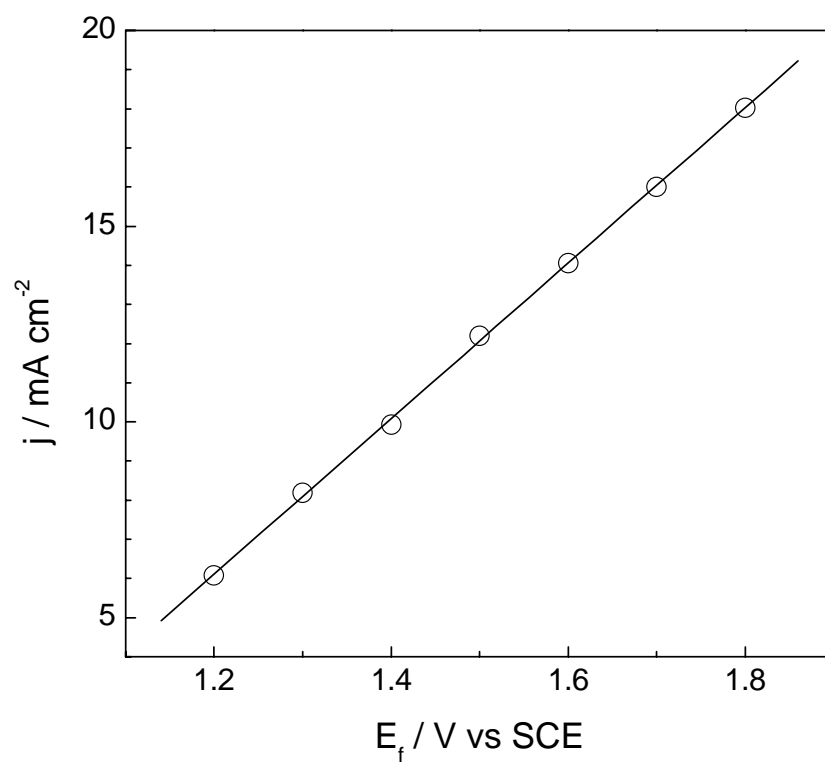


Figure S1 The plot of the initial current density (j) at $t = 10$ ms vs E_f in the Cottrell plots of a Ru-WO₃ film ($\Gamma_{\text{Ru}} = 2.0 \times 10^{-8} \text{ mol cm}^{-2}$). The conditions are indicated in Figure 3.

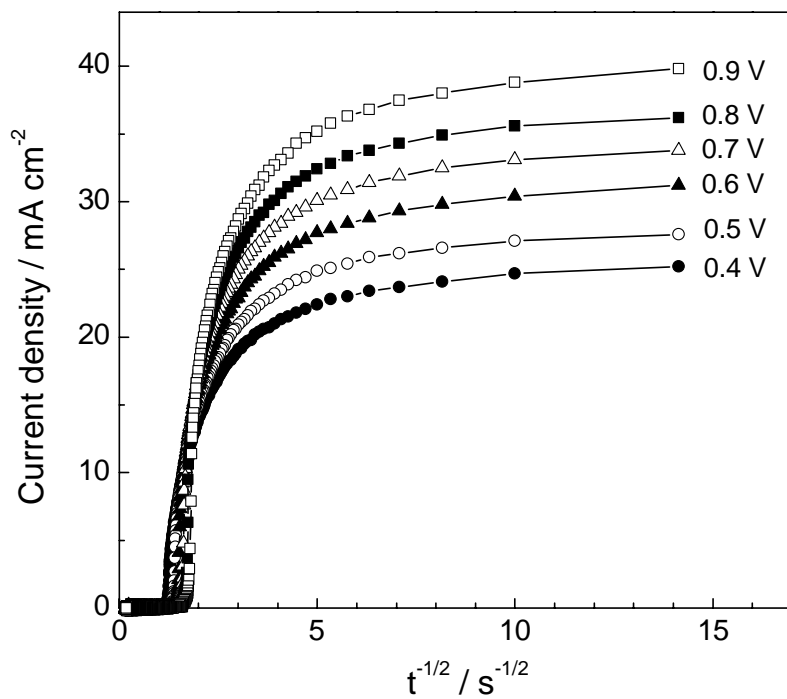


Figure S2 Cottrell plots in PSCAS measurement of a neat WO₃ film in a 0.1 M KNO₃ aqueous solution (pH = 1.2) as measured with E_f changed from 0.4 V to 0.9 V vs SCE.

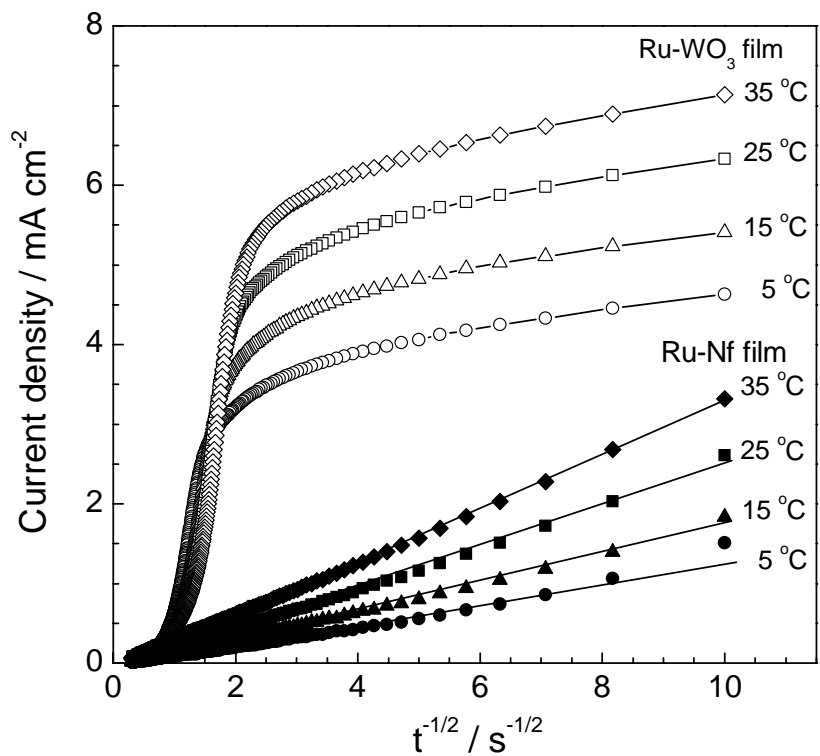


Figure S3 Cottrell plots in PSCAS measurement of a Ru-WO₃ film (open symbols, $\Gamma_{\text{Ru}} = 2.4 \times 10^{-8} \text{ mol cm}^{-2}$) and a Ru-Nf film (closed symbols, $\Gamma_{\text{Ru}} = 2.3 \times 10^{-8} \text{ mol cm}^{-2}$) in a potential step from 0.4 V to 1.5 V vs SCE in a 0.1 M KNO₃ aqueous solution (pH = 1.2) as measured at different temperature.