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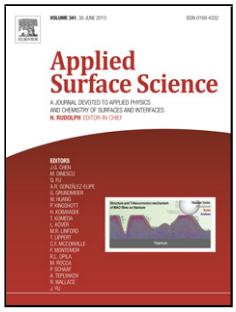

Title: Electrical characteristics of dip coated TiO_2 thin films with various withdrawal speeds for resistive switching applications

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Electrical characteristics of dip coated TiO_2 thin films with various withdrawal speeds for resistive switching applications

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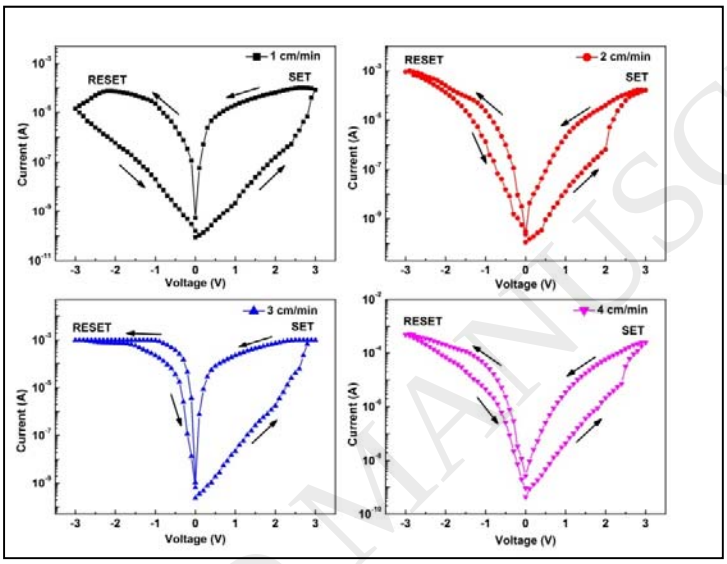
Graphical abstract



Resistive switching behavior of dip coated TiO_2 films.

Highlights

* TiO_2 thin films were dip-coated on silicon substrate by varying the withdrawal speed from 1cm/min to 4 cm/min.

* The thickness and crystallinity of the films is found to be increased with the withdrawal speed.

* The films deposited at lower withdrawal speed have possessed high oxide and interface charge density of 2.5×10^{12} cm^{-2} and 2.1×10^{12} $eV^{-1}cm^{-2}$, respectively.

* The films coated with a withdrawal speed of 1 cm/min have shown better resistive switching behavior with an enhanced memory window in both the polarities.

Abstract