Electronic Supplementary Material (ESI) for Journal of Materials Chemistry C.

Supporting Information

Bipolar resistive switching property of Si_3N_{4-x} thin film depending on N-deficiency

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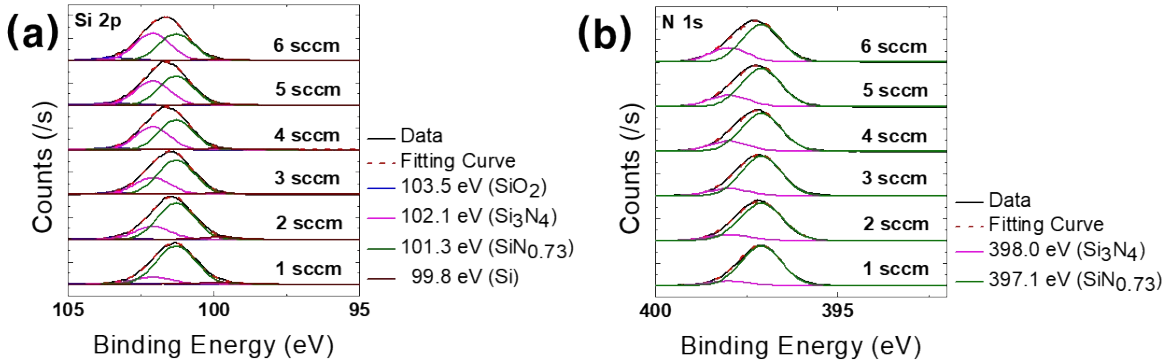

Fig. S1. Typical peak convolution of (a) Si and (b) N for 1~5 sccm NH_3 flow rate devices.

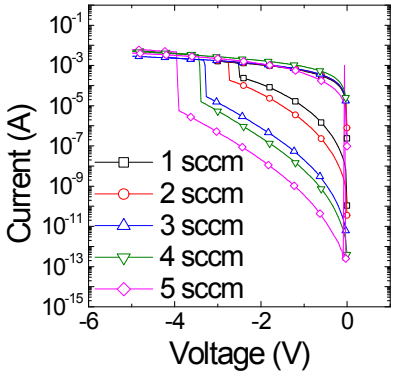

Fig. S2. Negative forming and LRS current curve for 1~5 sccm NH_3 flow rate devices.

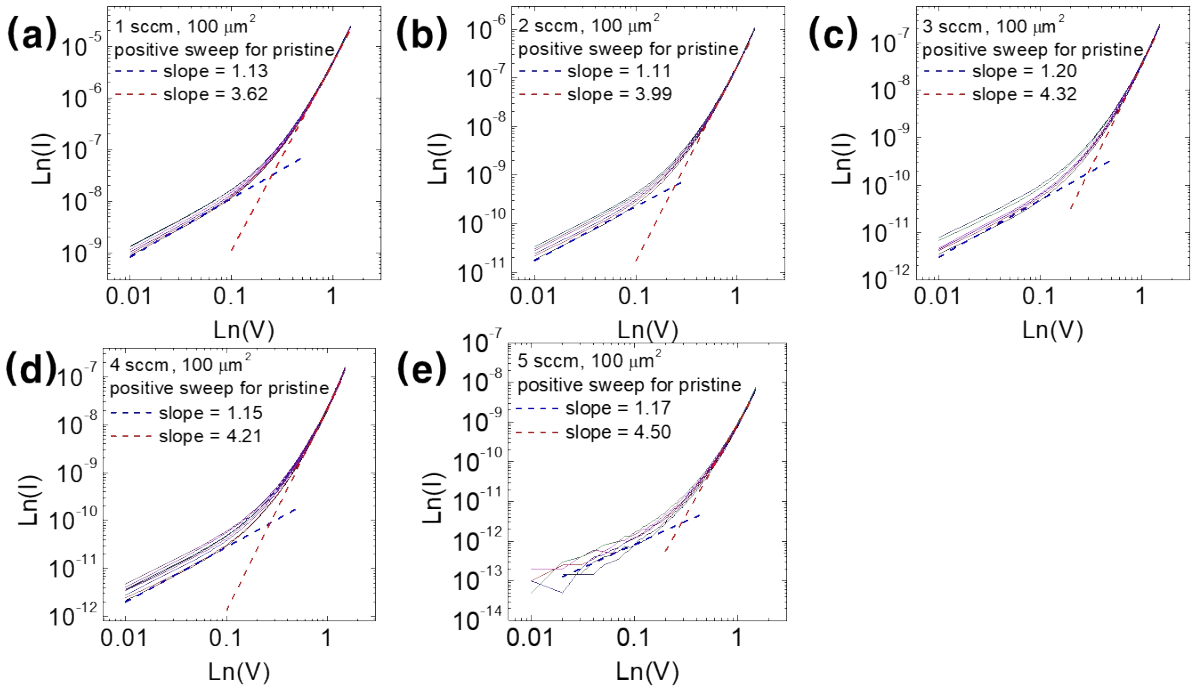

Fig. S3. Ln(I) vs. Ln(V) are drawn for pristine (a) 1 sccm, (b) 2 sccm, (c) 3 sccm, (d) 4 sccm and (e) 5 sccm, respectively.

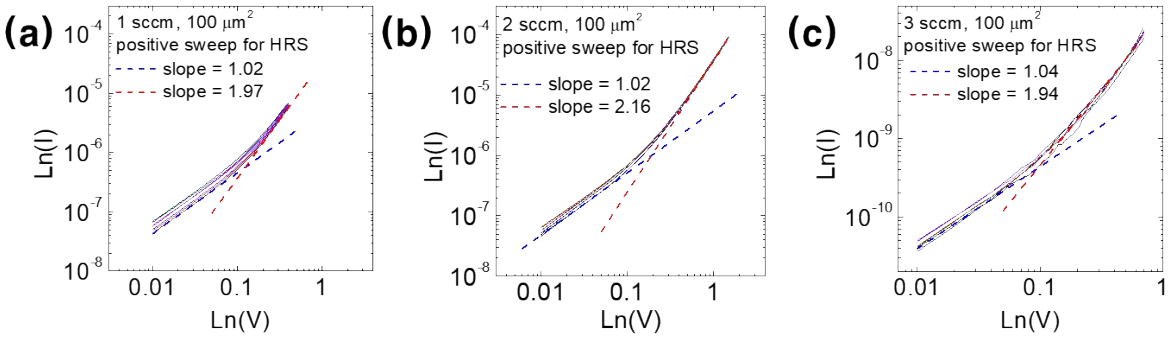

Fig. S4. Ln(I) vs. Ln(V) are drawn for HRS (a) 1 sccm, (b) 2 sccm, (c) 3 sccm, respectively.

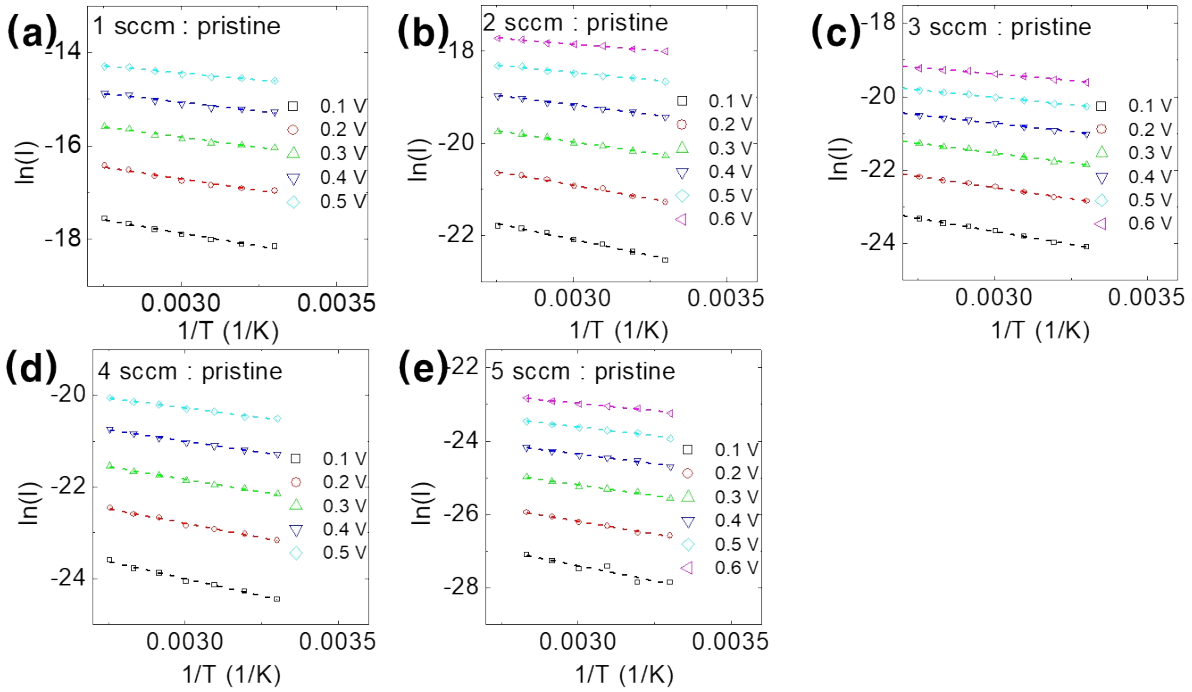

Fig. S5. Ln(I) vs. 1/T are drawn for pristine (a) 1 sccm, (b) 2 sccm, (c) 3 sccm, (d) 4 sccm and (e) 5 sccm, respectively.

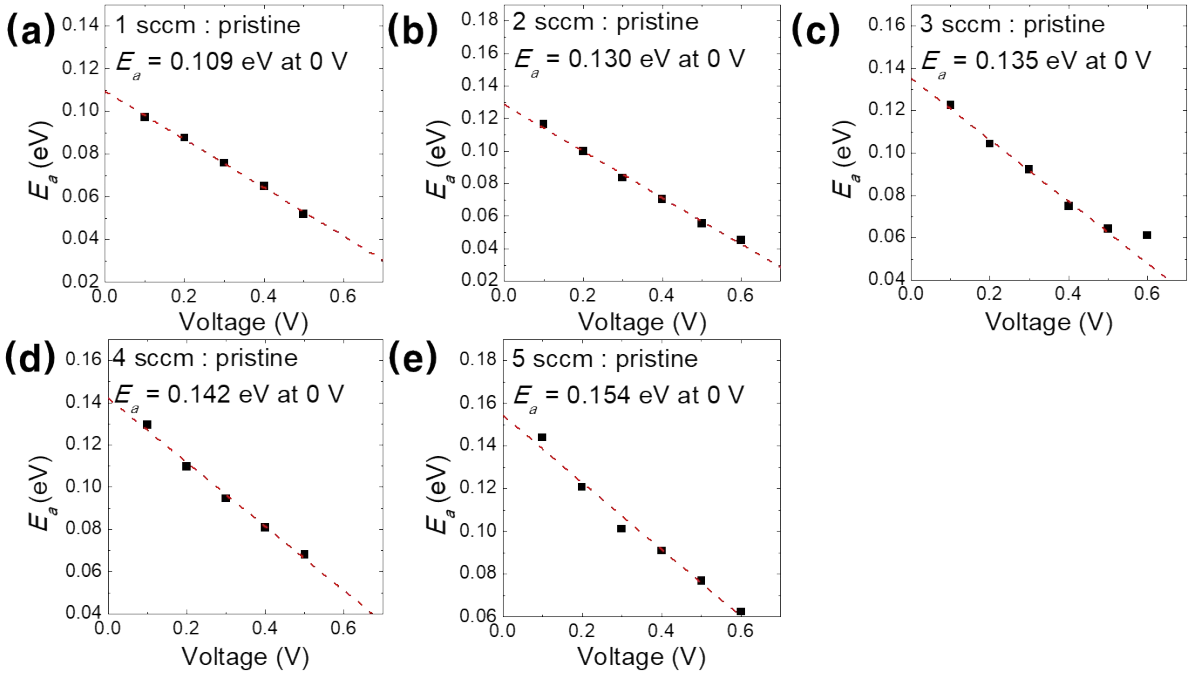

Fig. S6. E_a vs. Voltage are drawn for pristine (a) 1 sccm, (b) 2 sccm, (c) 3 sccm, (d) 4 sccm and (e) 5 sccm, respectively.

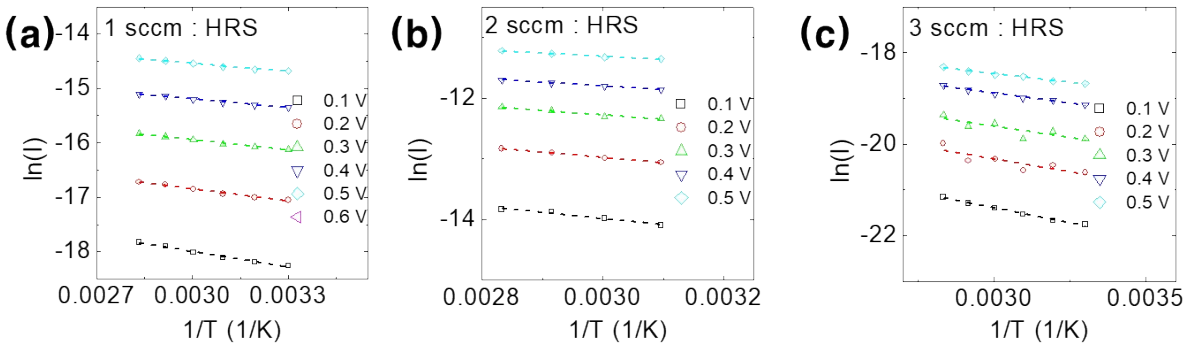

Fig. S7. Ln(I) vs. 1/T are drawn for HRS (a) 1 sccm, (b) 2 sccm and (c) 3 sccm, respectively.

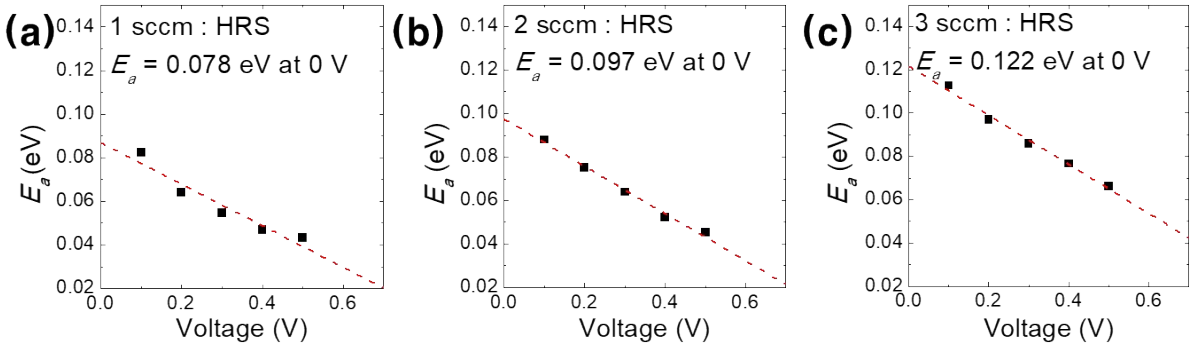

Fig. S8. E_a vs. Voltage are drawn for HRS (a) 1 sccm, (b) 2 sccm and (c) 3 sccm, respectively.