

Fig. 1 The dependence of etch rates of SiO<sub>2</sub>, SiN, and a-C on the hydrogen content at  $T_s = 20^\circ\text{C}$

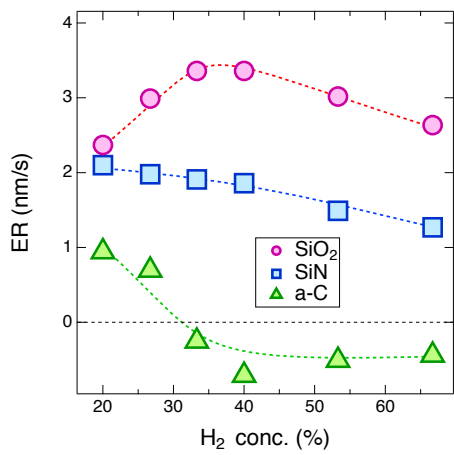


Fig. 2 The dependence of etch rates of SiO<sub>2</sub>, SiN, and a-C on the hydrogen content at  $T_s = -60^\circ\text{C}$

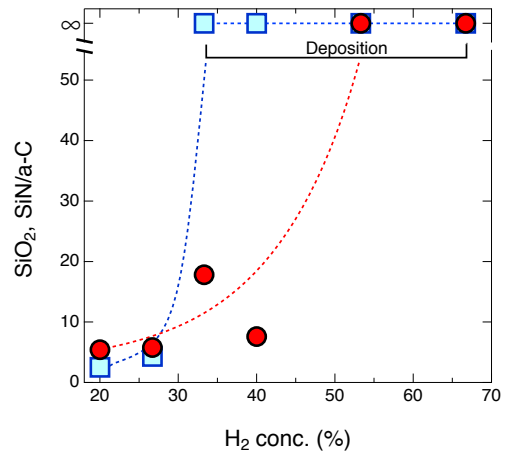


Fig. 3 The dependence of the selectivity of SiO<sub>2</sub>, SiN/a-C on hydrogen content at  $T_s = 20^\circ\text{C}$  and  $T_s = -60^\circ\text{C}$

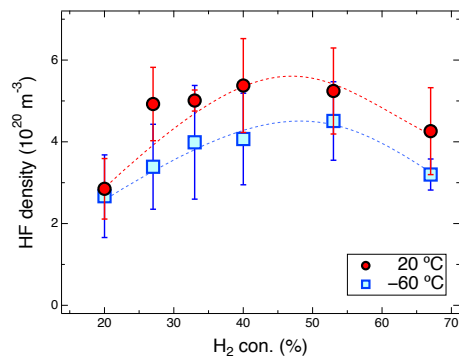


Fig. 4 The dependence of HF density in gas phase on the hydrogen content at  $T_s = 20^\circ\text{C}$  and  $T_s = -60^\circ\text{C}$