

Supplementary Figures

The existence of temperature dependent weak ionic relaxation mode (TDWIRM) starts at 55°C and retains even at SmC*-SmA phase transition temperature. The inset of figure shows the variation of relaxation frequency of TDWIRM which indicates the increase in relaxation frequency with increasing temperature. On applying the bias field, the TDWIRM suppressed very easily even at very small bias voltage which also suggests its existence due to the ionic carriers.

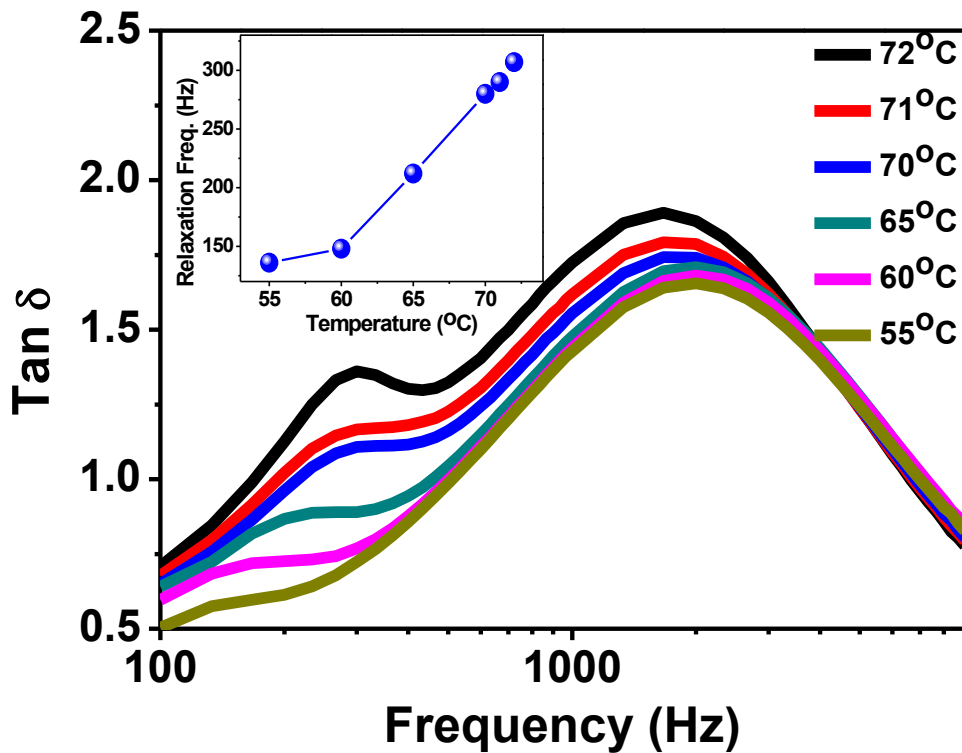


Figure 1. The change in $\tan \delta$ with the variation of frequency at different temperatures (55°-72°C). The figure discloses the existence of temperature dependent weak ionic relaxation mode (TDWIRM) in FLC-QD mixture. The inset of figure shows the variation of relaxation frequency of TDWIRM on temperature scale.

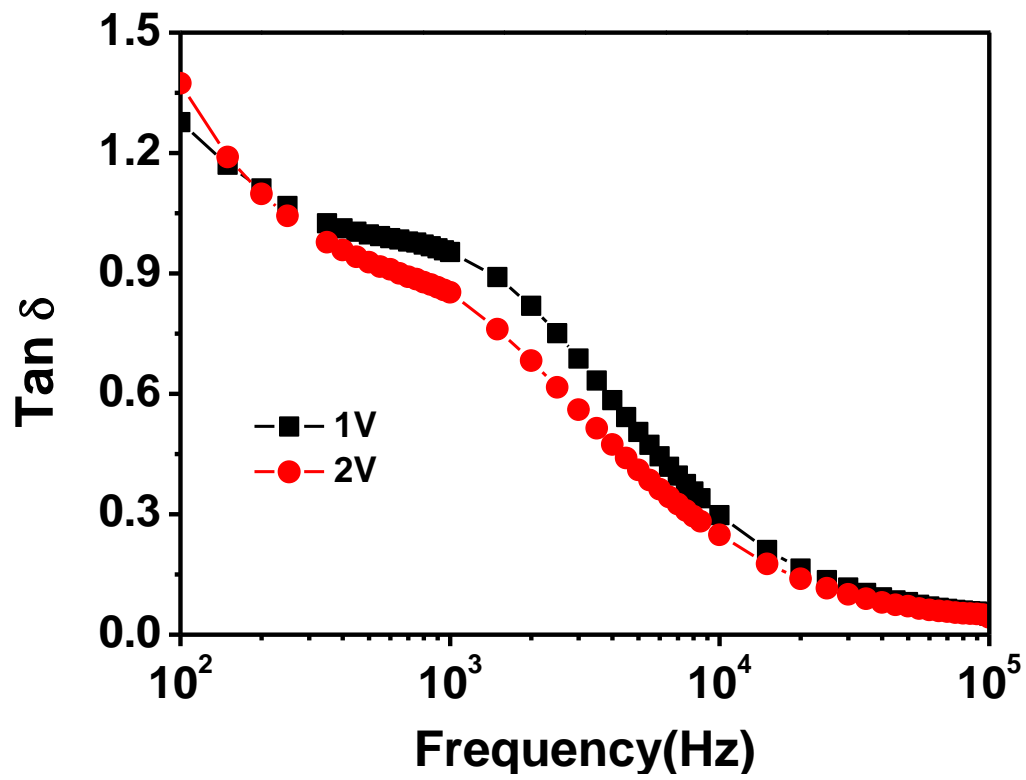


Figure 2. Effect of bias voltage on the TDWIRM. The TDWIRM suppresses at very low bias voltage (2V) which suggests its origination due to ionic carriers.