Fatal contradiction of “Ion migration” concept as an origin of hysteresis

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ments were curtailed because of melting of samples. The melting points thus found are 604 ± 3°C for $CsPbCl_3$, 500 ± 10°C for $CsPbBr_3$, and 491 ± 1°C

$CsPbCl_3$ for example

IONIC CONDUCTION OF THE PEROVSKITE-TYPE HALIDES

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The ionic conduction in the perovskite-type halides, $CsPbCl_3$, $CsPbBr_3$ and $KMnCl_3$, w made of ac conductivity at temperatures from 150°C to the melting point, and of ionic tra Tubandt, EMF and ion-blocking methods. The effects of impurity doping on the ionic cond studied using the samples of composition, $CsPb_{0.99}M_{0.01}Cl_{2.99}$ (M = Li, Na, K, Ag). It wa are halide-ion conductors. The ionic conductivities of $CsPbCl_3$ and $CsPbBr_3$ are close to th conductors, $PbCl_2$ and $PbBr_2$. The ionic transport numbers were found to be >0.9 for CsP 0.99 for $KMnCl_3$. The conduction was considered to be caused by the migration of halide-i The activation energies for the migration of $V_X^{\cdot}$ were 0.29 eV for $CsPbCl_3$, 0.25 eV for Cs The vacancy diffusion coefficients of these materials were found to be very large. However increase the ionic conductivity markedly because of small dopant solubility.

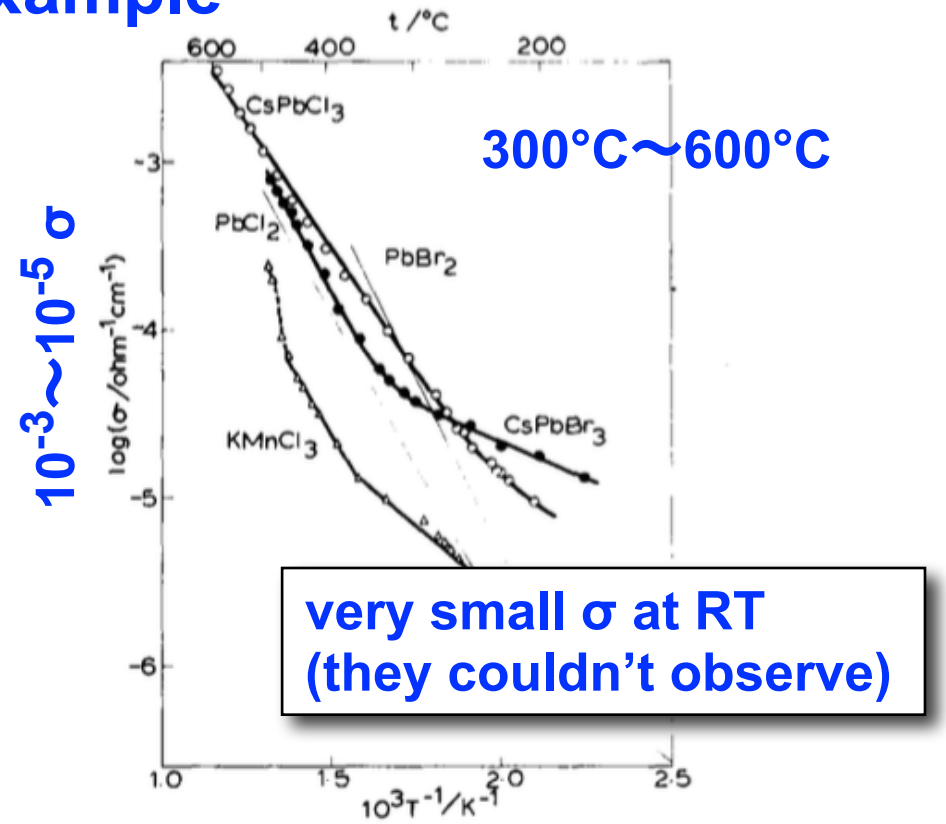

Fig. 3. Conductivity of perovskite-type halides. Conductivity of lead halides are also shown by thin lines.

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