

Novel dielectric relaxation behaviors driven by host-guest interactions in intercalated compounds of Kaolinite with amino-pyridine derivatives

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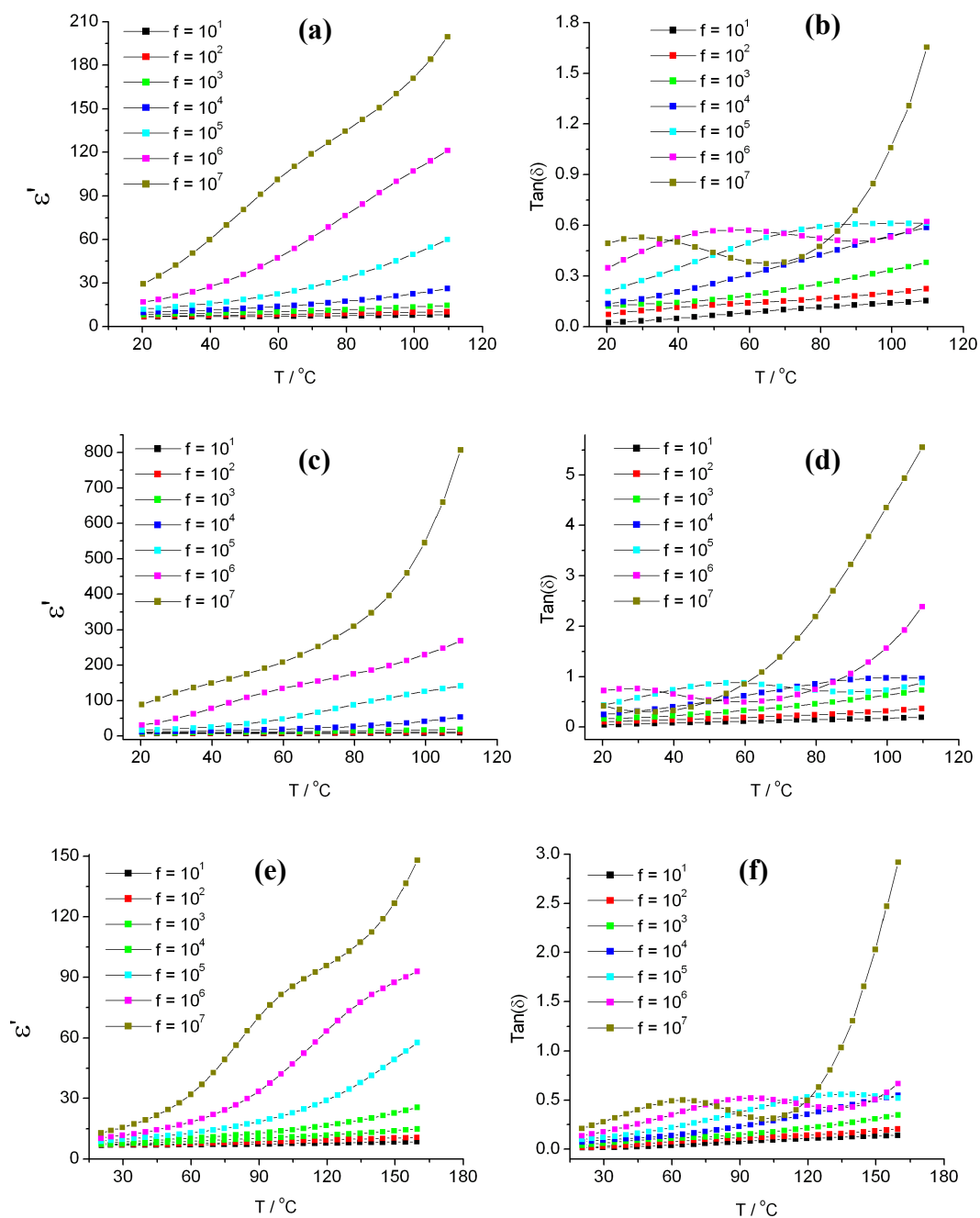


Figure S1 Temperature dependences of ϵ' and $\tan(\delta)$ in the frequency range of 1-10⁷ Hz for (a, b) 2-APy-K (c, d) 3-APy-K and (e, f) 4-APy-K in the second heating run.

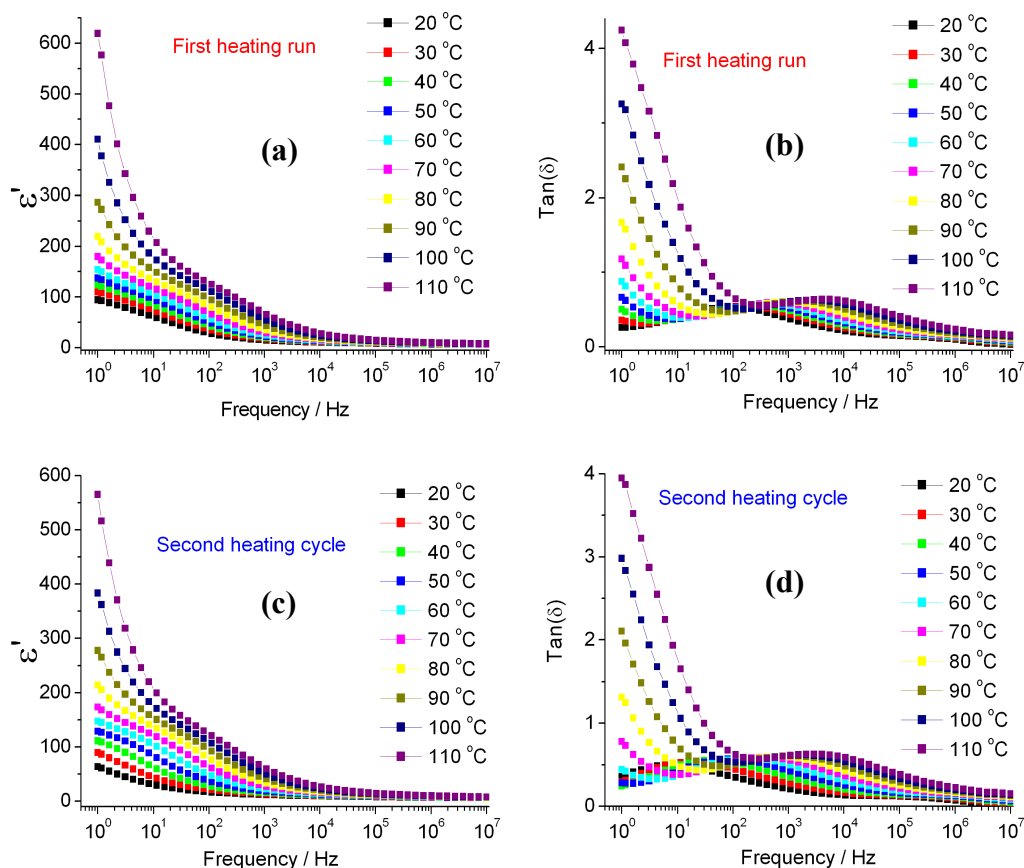


Figure S2 Frequency dependences of ϵ' and $\tan(\delta)$ in the temperature range of 20-110 °C for 2-APy-K in the first heating cycle and the second heating cycle. Both plots of ϵ' -f and $\tan(\delta)$ -T in two sequential heating cycles are quite similar to each other, indicating that the intercalatant molecules were not de-intercalated at 110 °C even though the measurement temperature is only 2 °C below the de-intercalation temperature).

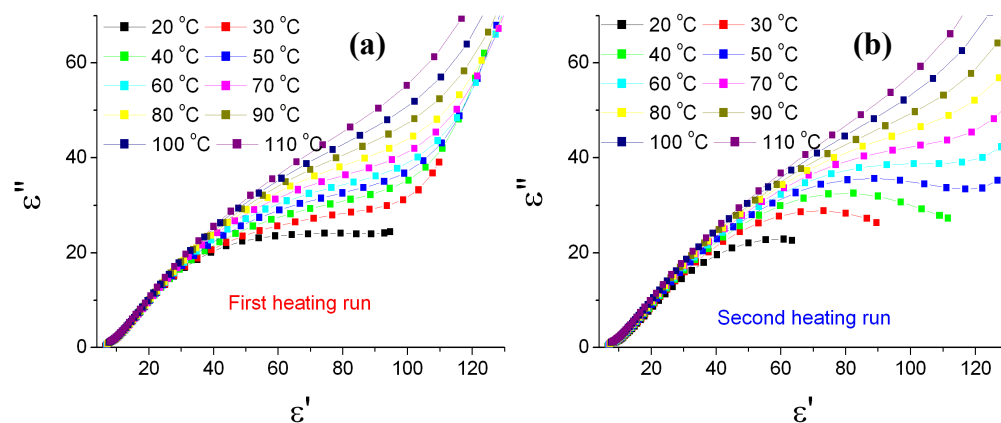


Figure S3 Cole-Cole plots at 20–110 °C in (a) the first heating run (b) the second heating run for 2-APy-K.

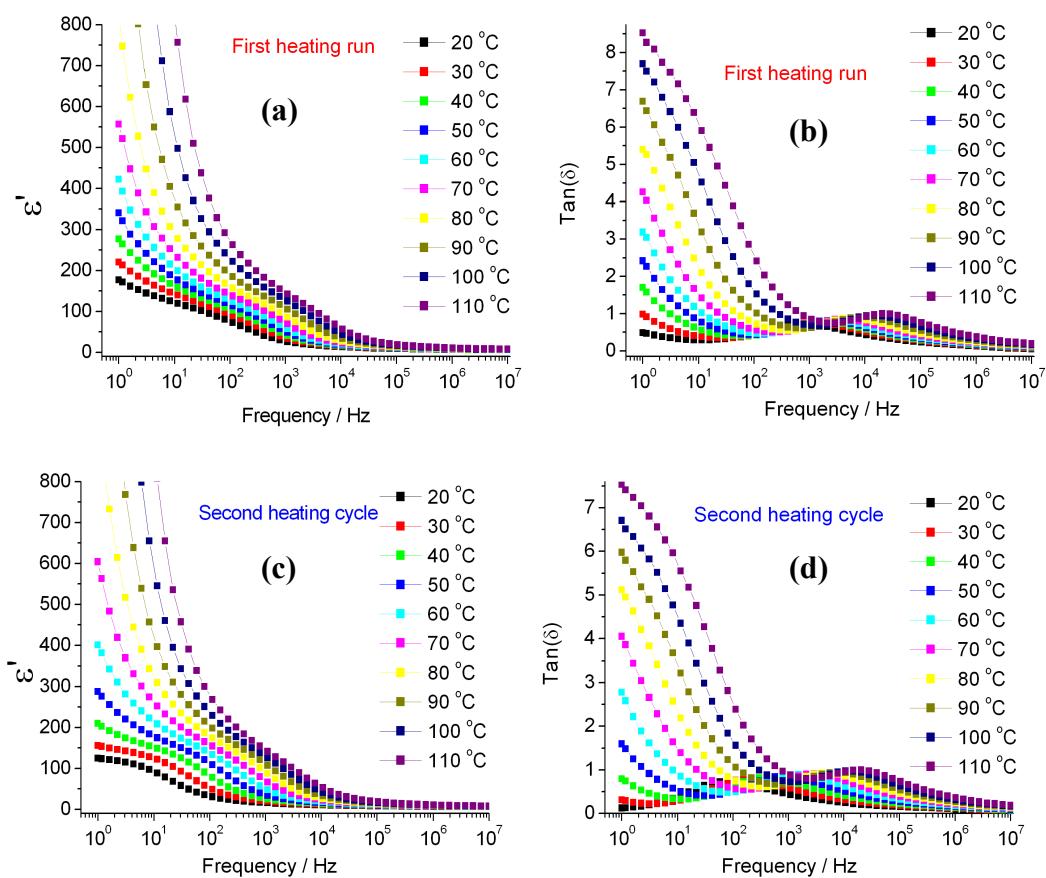


Figure S4 Frequency dependences of ϵ' and $\tan(\delta)$ in the temperature range of 20-110 °C for **3-APy-K** (a, b) the first heating cycle (c, d) the second heating cycle. The results in two sequential heating cycles are comparable to each other.

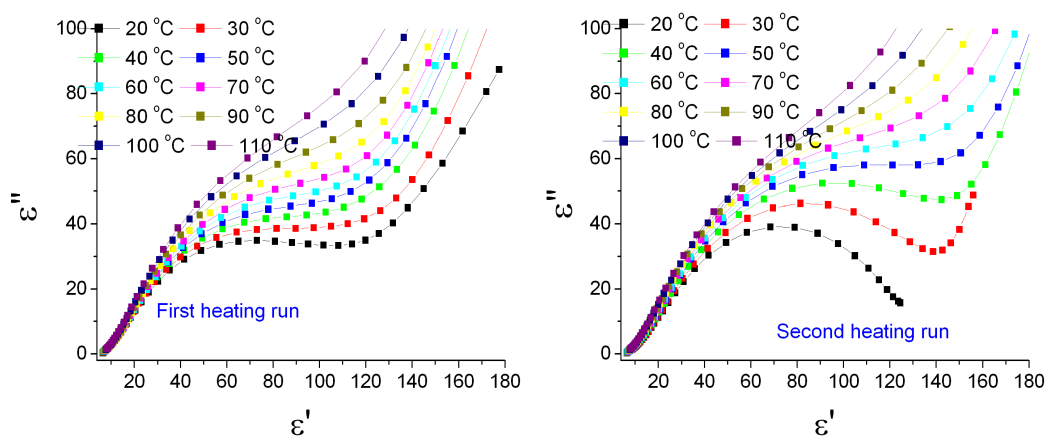


Figure S5 Cole-Cole plots at 20–110 °C in (a) the first heating run (b) the second heating run for **3-APy-K**.

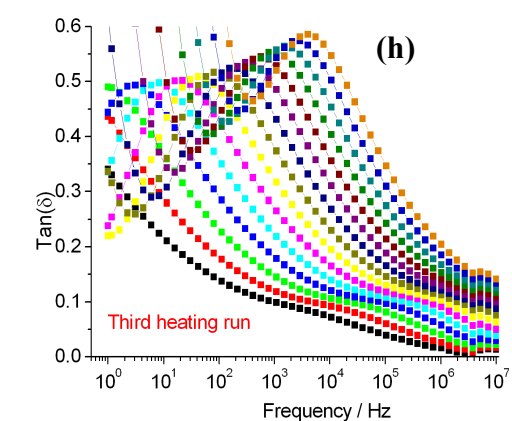
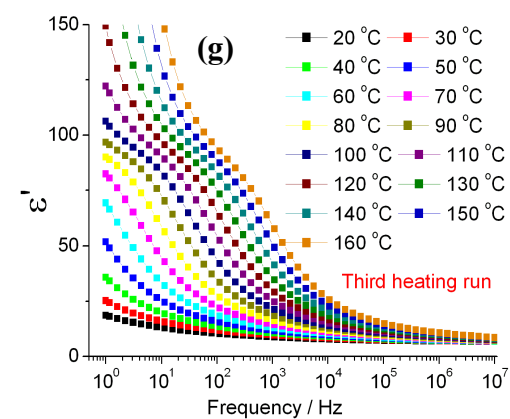
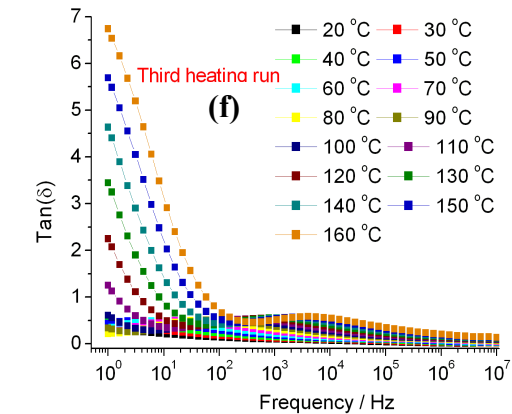
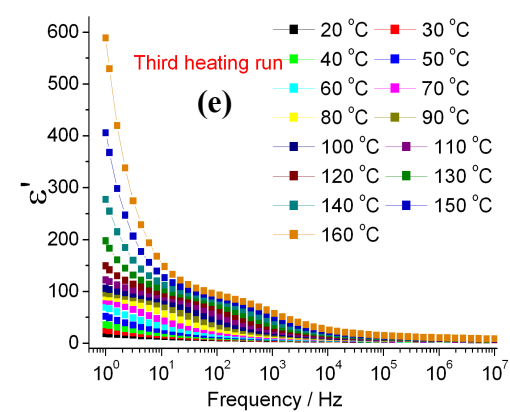
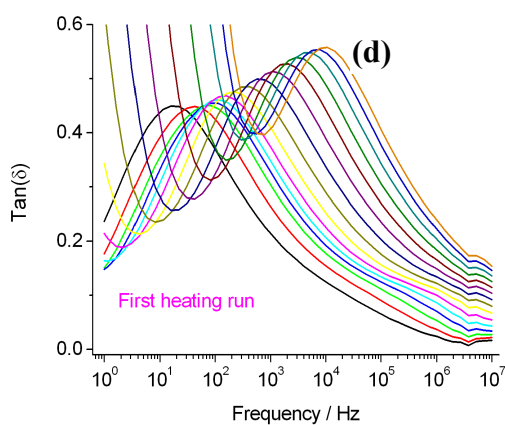
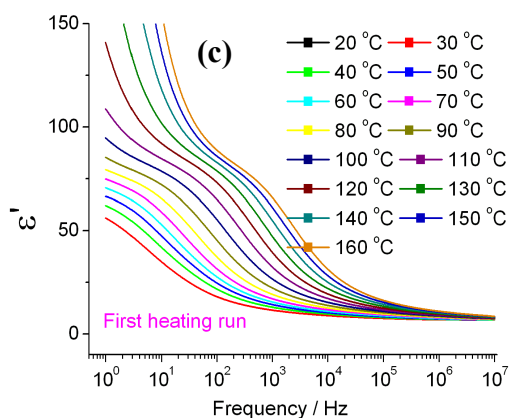
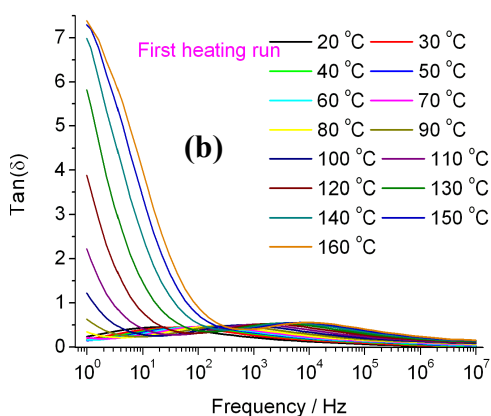
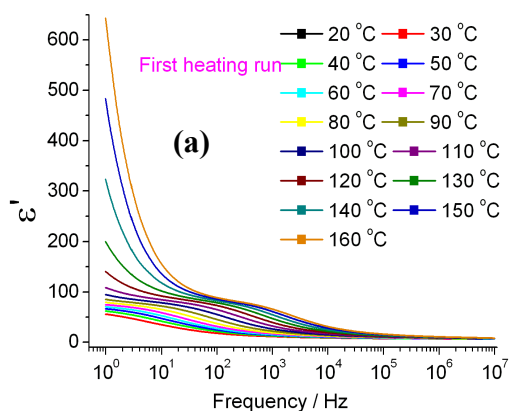


Figure S6 Frequency dependences of ϵ'' and $\tan(\delta)$ in the temperature range of 20-160 °C for **4-APy-K** (a-d) the first heating cycle (e-h) the third heating cycle. The results in two heating cycles are comparable to each other as well as the second heating run.

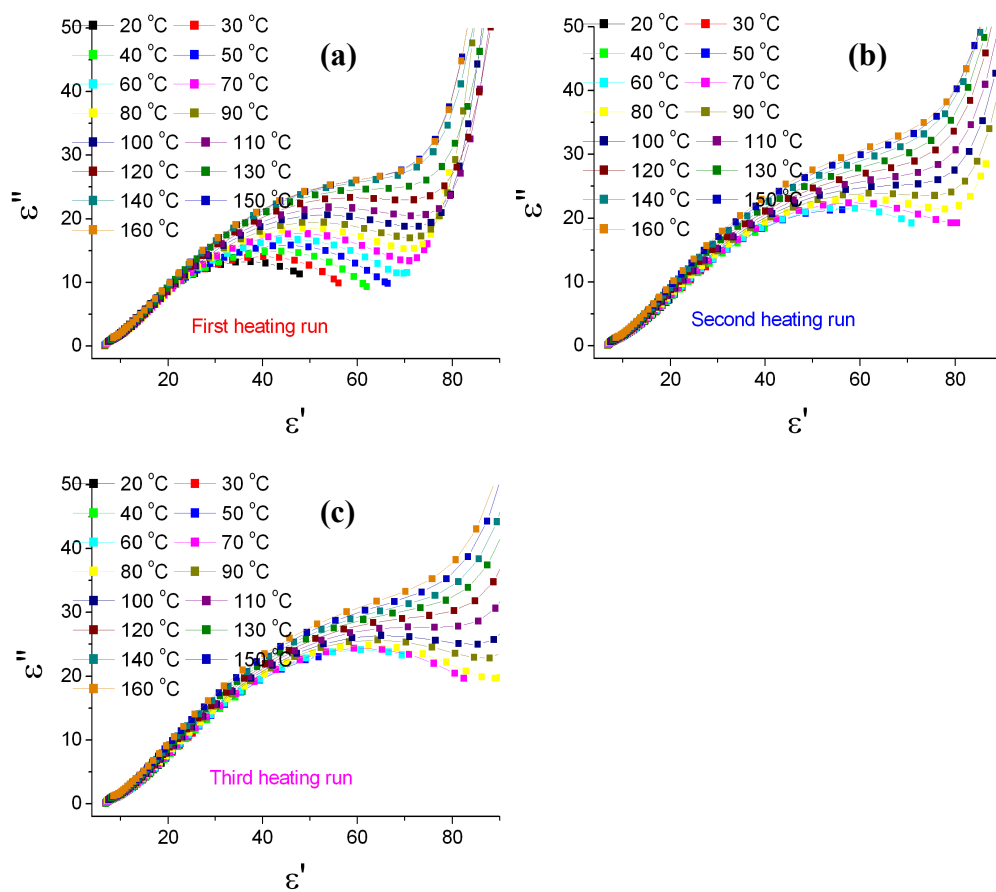


Figure S7 Cole-Cole plots at 20–160 °C in (a) the first heating run (b) the second heating run and (c) the third heating run for **4-APy-K**.