

SUPPLEMENTARY INFORMATION

Novel analytical approaches for the study of mobility and relaxation phenomena in positional isomers of GABA

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Hot-stage Microscopy (HSM) Data for GABA and its Positional Isomers

HSM methodology: HSM images of the aminobutyric acids were obtained using a Mettler Toledo hot-stage attached to a Leica microscope equipped with a camera. The footages were taken at x10 magnification. During the analysis samples were heated at 5°C/min from ambient temperature to 350°C.

DL-AABA (Fig. 1) undergoes complete sublimation when heated from ambient temperature to 350°C. The particle size of the sample decreases but it does not melt. The clarity of the images decrease at around 240°C and by 250°C no particles are observed.

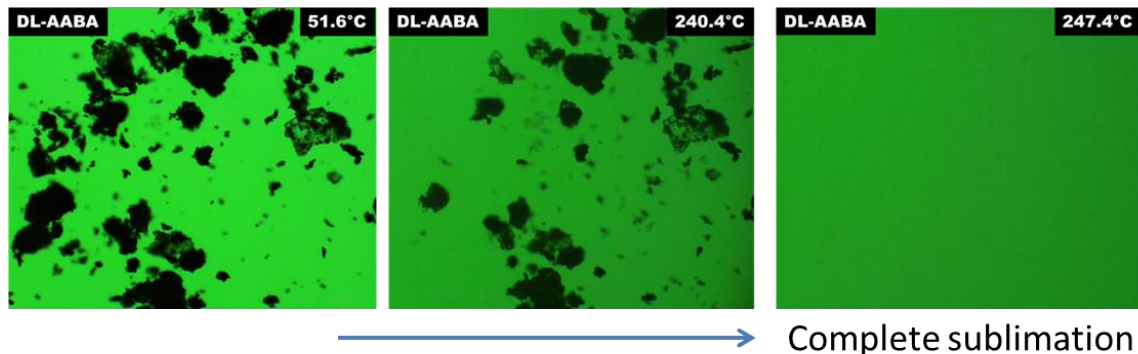


Fig. 1. HSM data for DL-AABA.

In the case of DL-BABA (Fig. 2) the samples melt at ~190°C followed by the first decomposition characterised by the discolouration of the melt, followed by the second decomposition process which causes the discoloured residue to get darker.

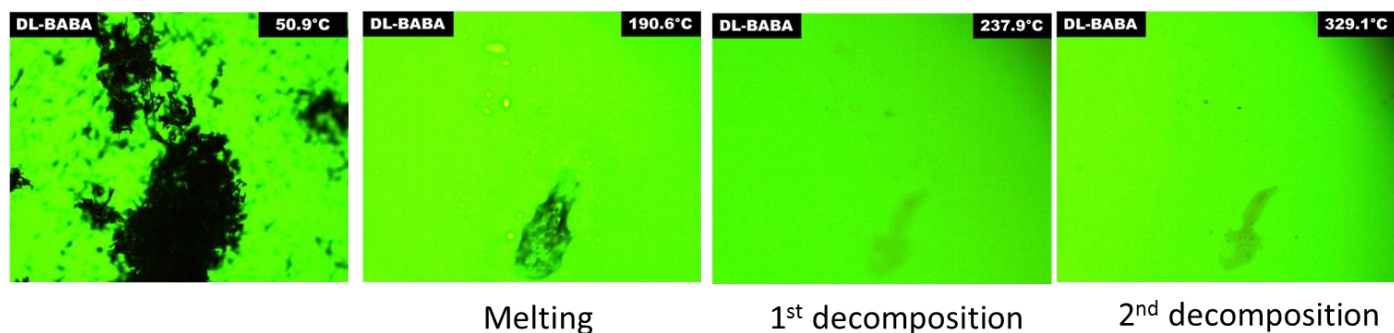


Fig. 2. HSM data for DL-BABA.

GABA (Fig. 3) undergoes a melt-decomposition process (verified by DSC analysis). As observed by HSM the sample melts at $\sim 212^{\circ}\text{C}$ and then decomposes leaving a black residue on the slide.

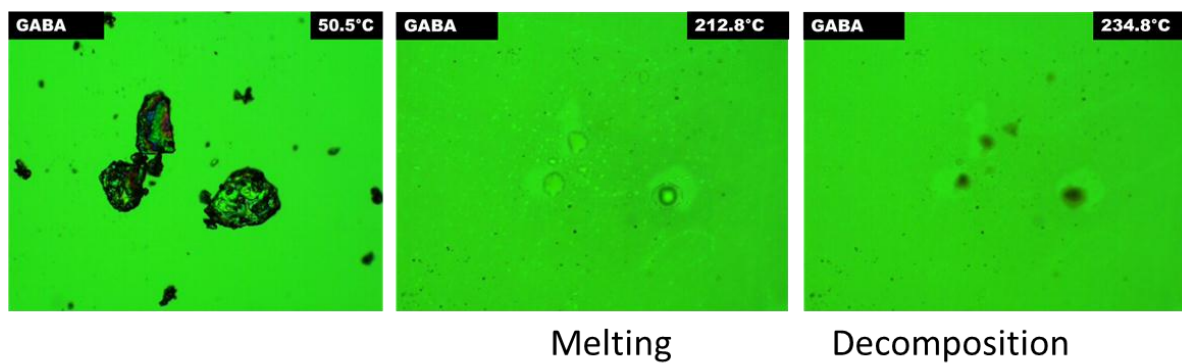


Fig. 3. HSM data for GABA.