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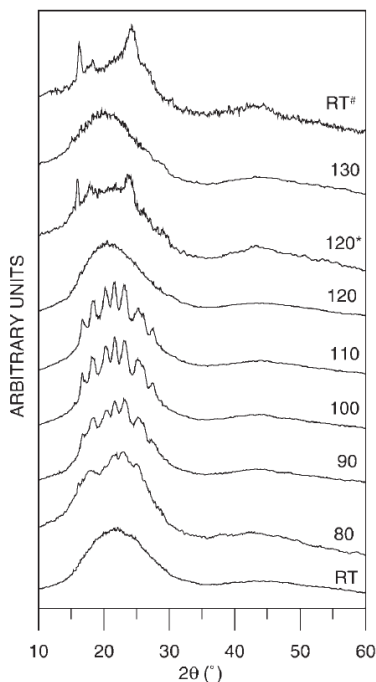
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Powder diffraction of polymeric materials under controlled environment

Non-ambient X-ray diffraction is an indispensable technique to investigate the influence of temperature, atmosphere or pressure on materials of any kind in the presence of fast reversible processes. Indeed, in these cases, a diffractometer working at ambient conditions on pre-treated samples is ineffective because when the physical stimuli (temperature, moisture, pressure) are stopped the sample returns to its original crystal form and no trace of developed phases remains in the XRD pattern. In the area of new polymeric materials, will be presented some examples of comparative XRD/DSC studies carried out with a hot stage.



XRD patterns of the thermal transformation of a PSDET quenched sample. The data were collected in situ at the indicated temperatures (°C).

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