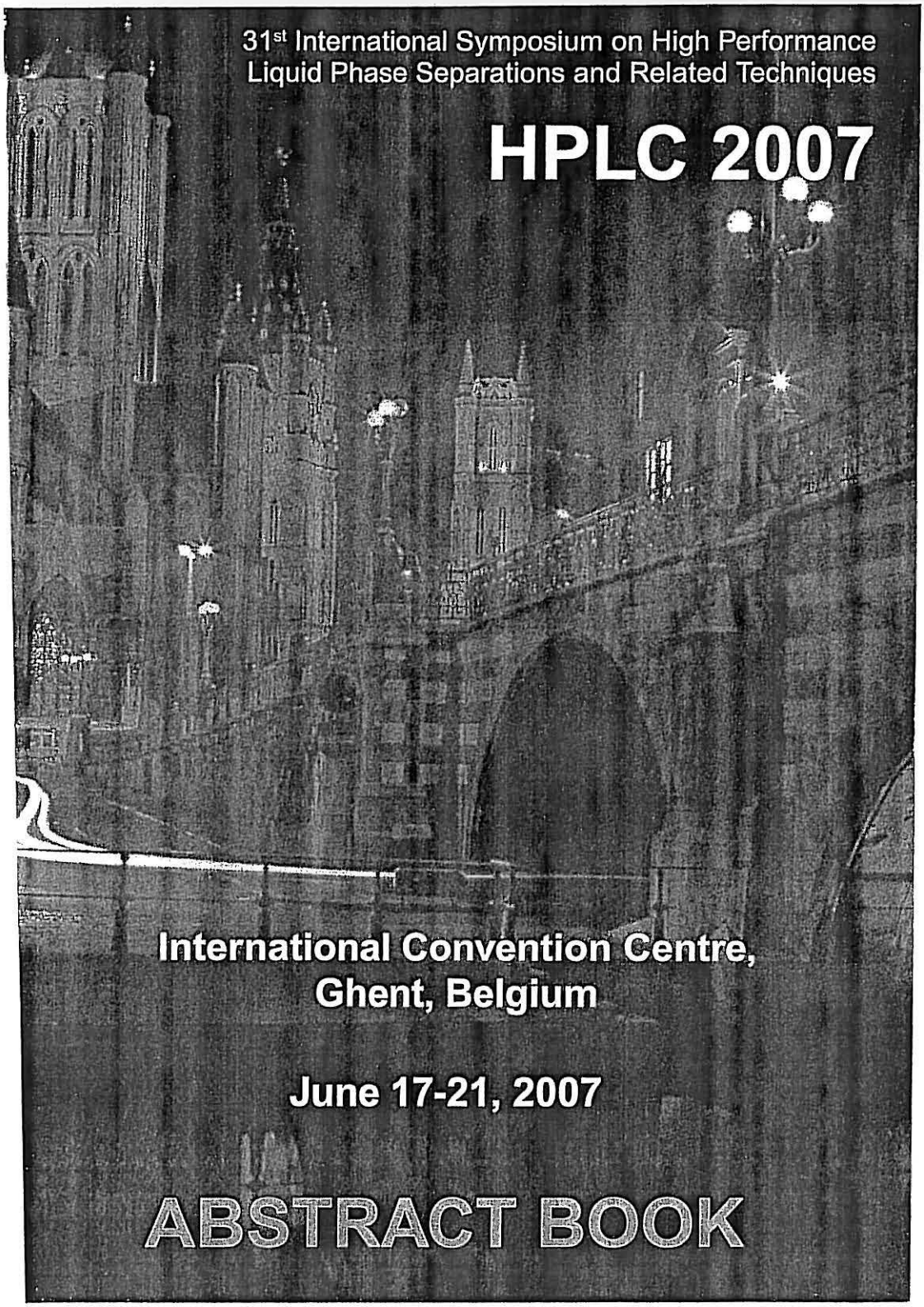
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ABSTRACT BOOK

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Influence of different fertilization regimes on the amounts of organic acids of *Brassica oleracea* L. var. *costata* DC

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Tronchuda cabbage (*Brassica oleracea* L. var. *costata* DC) exhibits large floppy leaves, which are close together, round, smooth and slightly notched at the margins. Its dark green external leaves are rather bitter and tough and are usually prepared by boiling. The internal leaves are pale yellow, tender and sweeter than the external ones, being consumed raw or, most usually, cooked. A phytochemical study was undertaken on this cabbage, cultivated under ten distinct fertilization regimes (application of two different levels of nitrogen, three different levels of boron and of sulfur, an organic fertilizer and grown without any fertilization) and collected at three distinct times. For the organic acids determination aqueous extracts of each sample were prepared by boiling. The resultant extracts were then lyophilized. The chromatographic separation of the organic acids was achieved using an ion exclusion column, Nucleogel Ion 300 OA (300 x 7.8 mm), in conjunction with a column heating device at 30 ºC. An isocratic elution with H_2SO_4 0.01 N as the mobile phase, with a flow rate of 0.2 mL/min, and UV detection at 214 nm were used. Principle Component Analysis (PCA) was applied to the results. Six compounds, namely oxalic, aconitic, citric, malic, shikimic and fumaric acids, were identified and quantified. Some quantitative differences were noticed between internal and external leaves: external leaves showed higher contents of citric, malic and shikimic acids. In addition, these samples exhibited the highest organic acids total amounts.