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Advances in the techniques of multi-dimensional and comprehensive chromatography, and when coupled with mass spectrometry

Part 1 of this keynote presentation summarises the principles of two dimensional gas and liquid chromatography (2DGC and 2DLC) and briefly introduces the theory accounting for the increase in separation resulting from a greater peak capacity than for the one dimensional (1D) mode. The advance in the techniques from multi-dimensional to comprehensive chromatography is discussed. The more recent development of multi-dimensional chromatography ion mobility mass spectrometry receives a mention to highlight the added dimension of molecular size and shape (molecular collision cross section) as an enabling tool for increasing component separation and peak capacity. Although both the techniques of 2DGC and LC are considered the focus is on 2DGC, principally when coupled to mass spectrometry

Biography

Peter J Baugh is a visiting professor at the University of Chester, UK, and he is currently the Environmental and Food Analysis Special Interest Group Leader for The British Mass Spectrometry Society with a responsibility for organizing meetings for this group. He has published over 75 papers in a variety of radiation and environmental fields and in respected journals.

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