

Professor Gert Desmet Winner of the 2009 Chromatographic Society Jubilee Medal



Professor Gert Desmet has been awarded the Silver Jubilee Medal for his internationally recognised work in the field of modelling and miniaturisation of chromatographic processes.

Professor Desmet is a chemical engineer and obtained his PhD in Chemical Engineering from the Vrije Universiteit Brussel, Brussels, Belgium and is the current head of the department of chemical engineering of that same university. He is professor in chemical engineering and analytical chemistry and more specifically teaches courses on industrial separation processes in the biotech-industry, bioreactor and chemical reactor engineering, nano- and microbiotechnology and chromatography.

His research focuses on the miniaturisation of separation methods and on the investigation and the modelling of flow effects in chromatographic systems. More specifically, he is leading a research group working on the practical demonstration of the separation speed of shear-driven and pressure-driven flow devices for ultra-fast chromatography and for DNA hybridization enhancement. On the theoretical side, his group aims at a better understanding of the relation between the packing structure and the performance of HPLC supports to suggest rules to optimize their shape and the external porosity. He is the first or senior author of 70 peer reviewed papers and 5 patent applications.

His key publications include;

Desmet, G. and Baron G. V., 1999, On the possibility of shear-driven chromatography: a theoretical performance analysis, *Journal of Chromatography A* 855, 57.

Desmet, G. and Baron G. V., 2000, The possibility of generating high speed shear-driven flows and their potential application in liquid chromatography, *Analytical Chemistry* 72, 2160-2165.

Clicq, D, Pappaert, K., Vankrunkelsven, S., Vervoort, N., Baron, G. V. and Desmet, G., 2004, Shear-driven Flows: A New Approach to LC and Macro-molecular Separations, *Analytical Chemistry* 76(23); 430A-439A.

Gzil, P., Vervoort, N., Baron, G. V. and Desmet, G., 2004, General Rules for the Optimal External Porosity of LC Supports, *Analytical Chemistry*, 76(22); 6707-6718.

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Desmet, G., Clicq, D. and Gzil, P., 2005, Geometry-independent Plate Height Representation Methods for the Direct Comparison of the Kinetic Performance of LC Supports with a Different Size or Morphology, *Analytical Chemistry*, 77, 4058-4070.

Professor Desmet received the Desty Memorial Award in 2006 and was the first recipient of the “Emerging Leader in Chromatography Award” from the readers of the LC-GC magazine in 2008. Professor Desmet, as his award from LC-GC suggests is one of our emerging separation science leaders and is currently leading a 2.6 million Euro initiative of the Flemish Government on the fabrication of micro-machined chromatographic columns.