



## Editorial

## Editorial on “Porous polymer monoliths: Amazingly wide variety of techniques enabling their preparation” by F. Svec

Porous polymer monoliths have been known for many years, but interest in their use as chromatographic materials was relatively low until the advent of porous silica monoliths. The appearance of silica monoliths was seen by many chromatographers as the start of a new age in chromatography and the commercial availability of these materials led to their widespread usage. In turn, this stimulated an intense revival of interest in polymer monoliths and the field has expanded dramatically in recent years. Polymer monoliths offer some distinct advantages for certain types of separations, especially for biomolecules. Their pH tolerance also means that a very wide range of mobile phases can be used. Finally, there is a rich diversity of approaches to modify the surface of the monolith in order to establish a desired chromatographic selectivity. Columns based on porous polymer monoliths have now been commercialised by a number of suppliers and this can be expected to further increase their use in routine separations.

The synthesis of the polymeric monolith itself is the most important step in the production of a suitable porous polymer monolithic stationary phase. Professor Frantisek Svec has provided a truly deep

and comprehensive review of the many approaches that can be adopted in undertaking this synthesis. The review covers early free radical polymerisation methods using thermal initiation, photoinitiation or radiation initiation. Some of the exciting and more recent approaches are then discussed in detail, such as polymerised high internal phase emulsions (polyHIPE), cryotropic gelation (cryogels), living polymerisations, and preparation of monoliths from soluble polymers.

Professor Frantisek Svec is a true pioneer of porous polymer monoliths and he and his colleagues from the E.O. Lawrence Berkeley National Laboratory, University of California, Berkeley, have been making seminal contributions to this field for many years. His work is characterised by great originality and innovation and I was therefore delighted that he agreed to accept my invitation to prepare a review. This review will be of immense value to both experts and novices in the field and I am sure that it will provide an outstanding resource of information on this topic.

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