

Special Issue on
Supercritical Fluids: Supercritical Fluid Extraction (SFE)
and Supercritical Fluid Chromatography (SFC)

Supercritical fluid extraction (SFE) with CO₂ with modifiers or CO₂ without modifiers is fast growing laboratory and industrial techniques, especially in Food, Pharmaceutical and Cosmetics industries. It is extraction with fluids without or nearly without of organic solvents. The processes are profitable for environment because of little contamination with organic solvents. The environmental pollution caused by solvents and their degradation products is a major ecological and health problem at the moment, since residues from those compounds can be present in natural waters, vegetables and fruits. Supercritical fluid chromatography (SFC) shares features with both HPLC and GC, and occupies a place somewhere between them. The mobile phases in SFC are substances in the supercritical state, and organic liquids may or may not be used as modifiers. There are two classes of SFC instrumentation: capillary-column SFC (CCSFC) predominantly utilizes the capillary columns produced for GC and, in most cases, uses CO₂ without modifiers; packed-column SFC (PCSFC) utilizes the packed columns produced for HPLC and, more recently, those produced for SFC. Zhao and Olesik have described phase diagram studies of methanol-CHF₃ and methanol – H₂O – CHF₃ mixtures. There have been some attempts to use halocarbons as mobile phases for SFC, but their use is very limited because halocarbons damage the environment. N₂O, NH₃, F₆S and n-butane have also been used for SFC. SFC has a high value for resolution of the enantiomers in Pharmaceutical industry. SFC in combination with mass spectrometry is a powerful tool in elucidation of molecular structures. Therefore, it is very important and necessary to develop methods for extraction and analysis of target substances without of excessive use of organic solvents as pollutants.

In this special issue, we intend to invite front-line researchers and authors to submit original research and review articles on exploring **Supercritical Fluids: Supercritical Fluid Extraction (SFE) and Supercritical Fluid Chromatography (SFC)**.

Authors should read over the journal's [Author Guidelines](#) carefully before submission, Prospective authors should submit an electronic copy of their complete manuscript through the journal [Paper Submission System](#).

Please kindly notice that the “**Special Issue**” under your manuscript title is supposed to be specified and the research field “**Special Issue-Supercritical Fluids**” should be chosen during your submission.

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