

Special Issue

Application of Supercritical Fluid and Compressed Gas in Pharmaceutical Technology

Message from the Guest Editors

Supercritical fluids and compressed gases act as a solvent, antisolvent, solute, plasticizer, atomizing gas, and carrier fluid. Using these various mechanisms, supercritical fluids and compressed gases have been widely used in the application and development of various pharmaceutical processes, such as particle formation, atomization, mixing, drying, extraction, impregnation, melting, adsorption, milling, foaming, coating, extrusion, etc. Supercritical antisolvent, spray drying, fluid bed coating, and jet milling are typically included in these pharmaceutical processes. In addition, there have been promising advances in pharmaceutical technology using supercritical fluids and compressed gases through the application to various pharmaceutical drug delivery systems, such as solid dispersion, microsphere, dry powder inhaler, porous carrier, and aerogel. In recent years, some hybrid processes via a combination of supercritical fluids and compressed gases have also been introduced. The aim of this Special Issue is to introduce the recent developments and findings for all topics related to the application of supercritical fluid and compressed gas in pharmaceutical technology.

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