

Special Issue

Advanced Computational Tools in Development and Assessment of Dosage Form

Message from the Guest Editors

Currently, scientists have more options for multidimensional assessments of products, combined with advanced computational tools like AI/ML and well-known computer vision algorithms with good performance. These tools enable a deeper understanding of production process outcomes and quality attributes of dosage forms quality attributes. They also allow for the prediction of the safety and efficacy of drug dosage forms. These developments are why we have proposed this topic, which we recognize as an important trend. This Special Issue explores the application of artificial intelligence, machine learning, and computer vision (AI/ML/CV) with advanced imaging techniques—such as micro-computed tomography (μ CT), Raman spectroscopy, scanning electron microscopy (SEM), IR microscopy, and RT UV imaging—for the assessment and optimization of drug dosage forms. Please note that a validation experiment is compulsory for article-type papers. This collection aims to showcase the potential of these state-of-the-art methods in analyzing the structural, chemical, and morphological characteristics of pharmaceutical formulations.

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