

Cartridge-based automated synthesis

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New automated laboratory systems can be extremely powerful tools, with numerous impressive examples of self-assembled automated systems and processes being reported in drug discovery and development in recent years. However, many of these systems are bespoke and unique to the end-user organisation that built them. Therefore, these technologies are not readily accessible to the wider community. Also, there is a tendency towards high complexity with many of these systems, and thus they are only operable by a small number of people with a highly specialized skill set. As such, the vast majority of chemists have so far been unable to profit routinely from automated technologies.

Synple Chem aims to address the needs of the broader chemistry community by providing an enabling technology for automating synthetic chemistry that is extremely easy to use and requires only a few minutes of training in its operation. The automated synthesizers use reagent cartridges, which contain all the materials needed to do the individual reactions and subsequent purifications, as well as the digital information for the reaction sequence



The effectiveness of such type of easy to use automation systems has been demonstrated both internally and by a wide range of chemists from pharma, biotech, CROs and academia. It is clear that having access to simple chemistry automation that enables the preparation of new compounds without the hassle of needing to operate, programme and optimise methods each and every time, is especially important to the discovery research community who seldom make the same compound twice, have little time for optimising automated synthesis equipment, and thus favour, wherever possible, the “off-the-shelf” solutions provided by this cartridge-based automated synthesis technology.