

## 3D printing crystallographic data for post-printing construction

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Though printing crystallographic data on 3D printers has become easier in recent years, current methods are limited by the capabilities of the 3D printer used. To rectify this, we have extended existing methods of 3D printing crystallographic structures by breaking the structure to be printed into multiple parts, adding connectors with CAD software, printing each part separately, and assembling the structure post-printing. Advantages include multicoloured printing on monocoloured printers, reduction of support structure use and print time, ease of transporting structures, and the ability to bypass print tray size limits. While this method is particularly applicable to extended structures, including coordination polymers, metal-organic frameworks, minerals, and hydrogen bonding networks, it can also be used to simplify the printing of small molecules. The effect of the connectors' shape on the reliability of printing (including on lower-end and hobbyist printers) and ability to preserve atomic orientation is examined in detail.

